[redacted]

IN THE

SUPREME COURT OF THE UNITED STATES.

[redacted]

DIAMOND RUBBER COMPANY OF NEW YORK,

Petitioner,

CONSOLIDATED RUBBER TIRE CO. AND THE RUBBER TIRE WHEEL CO.,

Respondents.

ON WRIT OF [redacted]

BRIEF AND [redacted] FOR PETITIONER.

By CHARLES [redacted]

[redacted]

OPY

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IN THE

Supreme Court of the United States,

OCTOBER TERM, A. D. 1909.

No. 36.

DIAMOND RUBBER COMPANY OF NEW YORK,
Petitioner,

vs.

CONSOLIDATED RUBBER TIRE CO. AND THE RUBBER TIRE WHEEL CO.,
Respondent.

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT.

Brief and Argument for Petitioner-Appellant.

BY

CHARLES K. OFFIELD.

Statement of Case as to Parties.

MAY IT PLEASE THE COURT:

The petitioner, the Diamond Rubber Company of New York, who was the defendant at the circuit, and the defendant appellant in the United States Circuit Court of Appeals for the Second Circuit, and the petitioner in this court, is a New York corporation having its place of business in the City,

County and State of New York. The principal occupation or business of the petitioner is the handling and sale of a solid rubber formation, to be cut up into lengths suitable for forming into solid rubber tires for wheeled vehicles of various types. The petitioner neither manufactures nor uses these formations of solid rubber or solid rubber tires upon any wheeled vehicles.

The respondent appellees, the Consolidated Rubber Tire Co. and the Rubber Tire Wheel Co., are corporate organizations respectively of the States of New Jersey and Ohio. The Consolidated Company manufactures and sells solid rubber in the form of rubber tires and accompanying rims for wheeled vehicles in the City and State of New York. The Rubber Tire Wheel Co. neither manufactures, sells nor uses solid rubber in the form of rubber tires or otherwise.

Statement of Case as to Subject Matter.

This case relates, as to subject matter, entirely to a single letters patent. The bill of complaint contains the usual allegations present in all patent suits praying an injunction and an accounting. (Rec., pp. 1-6.) The patent in suit are letters patent granted to one Arthur W. Grant under date of February 18, 1896, and No. 554,675, for an alleged new and useful improvement in rubber tired wheels. The Consolidated Company claims to be the exclusive licensee of the Rubber Tire Wheel Co. under said letters patent, and the presence of the Rubber Tire Wheel Co. as joint complainants

in this litigation is justified only by the asserted ownership of the naked legal title to the said letters patent. The Diamond Company, petitioner, is alleged to infringe this Grant patent by the purchase and sale, and by infrequent instances of application for use, of the device or tire of the Grant patent, in some way or in some manner not particularly defined, the only instance of proof of such alleged infringement being shown in two exhibits present in this case and marked respectively, "Complainants' Exhibit, Defendant's Rubber Tire," and "Complainatn's Exhibit, Section Diamond Company Tire." There are but two claims to said Grant patent, and both claims are alleged to be infringed, the solid rubber lengths or tires thus alleged to be an infringement being manufactured at Akron, Ohio, by a corporation of that state—the Diamond Rubber Company of Akron, Ohio, and purchased by the petitioner only from that company in that state; the solid rubber lengths so purchased by the petitioner being continuous long lengths like a clothesline and wound frequently like a clothesline on a reel and so sold.

The answer in this case is the usual answer in all patent cases with one or two exceptions, as will hereafter appear. (Rec., pp. 79-92.) It will be a matter of convenience hereafter, for conciseness, to court and counsel, to speak in this brief of the petitioner as the Diamond Company, the respondent as the Consolidated Company and the patent in suit as the Grant patent. We take it that it will be without profit as a justification for the presence of this case in this court, to attempt to justify such

presence by any close recital of the formal or technical rules of procedure thought to be necessary in the court below. The case is now here in this great court, and will be taken up and passed upon with an eye single only to the justice and merits of the case and the rights, legal and equitable, of the parties litigant, irrespective of the numerous complicated litigations as to this patent antecedent to its presence in this court. If it is necessary to refer, for any reason, to the Assignment of Errors asserted in the Court of Appeals, under the usual formula, such assignment will be found with allowed petition for appeal on. (Rec., pp. 674-5.)

The patent was held valid at the circuit and infringed—Judge Holt's opinion. (Rec., pp. 672-3.) The decree of the court below was affirmed by the Court of Appeals of the Second Circuit. (Rec., pp. 681-4.) A petition for rehearing was filed in due order of time and denied. (Rec., pp. 684-693.) The petition for certiorari was filed in this court July 24, 1908, and granted upon October 21, 1908, and in due order of time the record was lodged in this court and printed as of the October term, 1909, under No. 209.

The Grant Patent in Suit.

Before presenting to your Honors the various litigations and opinions of courts and judges in the different circuits as to this Grant patent in suit, and the claims made for it pro and con, we deem it advisable for a more full and better understanding of the questions at suit that your Honors should

obtain a familiarity with this Grant patent solely from the face of the patent itself. The Grant patent is found on Rec., pp. 76-78. We herewith reproduce the four drawings of said patent as showing the entire device of Grant and the construction of that device, as identified by the two claims, it being only necessary to read the claims of the patent in connection with these drawings to understand fully everything that Grant did in the then crowded art to which this patent relates. The following are the drawings:

(No Model.)

A. W. GRANT.

RUBBER TIRED WHEEL.

No. 554,675. Patented Feb. 18, 1896.

Fig 1

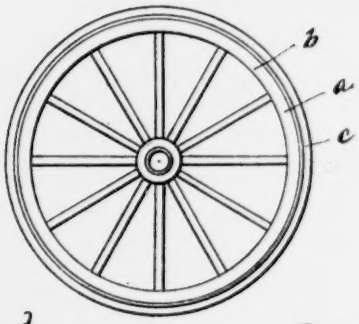


Fig 1c

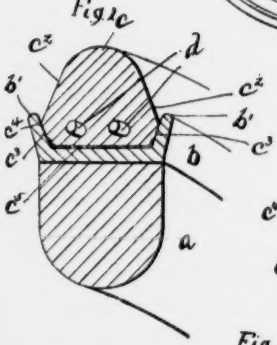


Fig 4.

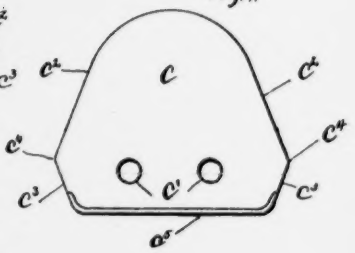
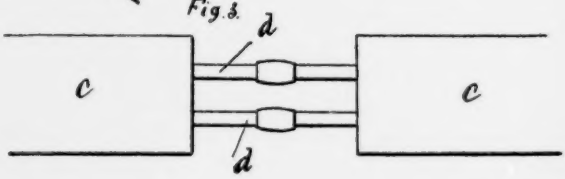


Fig 3.



Witnesses
Chas. G. Wolcott
F. L. Walker

Inventor
Arthur W. Grant
By his Attorney
Chas. A. Wolcott

The claims read as follows:

"1. A vehicle-wheel having a metallic rim with angularly projecting flanges to form a channel or groove with tapered or inclined sides, a rubber tire, the inner portion of which is adapted to fit in said groove or channel and the outer portion having sides at an angle to the inner portion, the angle or corner between the outer and inner portions being located within the outer periphery of the flanges, and independent retaining wires passing entirely through the inner portions of said tire and also within the outer peripheries of the flanges, substantially as described.

"2. A vehicle-wheel having a metallic rim with outwardly projecting flanges at an angle to the plane of said wheel so as to form a channel or groove having tapered or inclined sides, a rubber tire, the inner portion of which is adapted to fit in said tapered groove or channel, and the outer or exposed portions formed at an angle thereto, the angle or corner between the said portions being placed within the outer periphery of said flanges, openings extending entirely through the unexposed portion of said tire, and independent retaining wires in said openings, and a reinforcing strip of fibrous material placed at the bottom of said tire and wholly within said flanges, substantially as specified."

The only difference your Honors will see between the two claims is the so-called reinforcing strip of fibrous material placed at the bottom of the tire, wholly within the flanges. These claims on their face are narrow and specific, and their technicality as to details and the uncertainty of the shown structure, as to the application and result, is intensified and made plain by reference to the specifica-

tions. Grant thus describes the four drawings just illustrated as follows:

> "In the accompanying drawings, figure 1 is a side elevation of a wheel embodying my invention. Figure 2 is a sectional elevation of the wheel rim, shown partly in perspective. Figure 3 is a partial longitudinal section through the tire, showing the openings for the retaining wires. Figure 4 is a transverse sectional view of the rubber tire in detail."

It will be seen by Grant's specifications that he states that his *invention* "consists in the *constructions and combinations of parts hereafter described*, and set forth in the claims" (italics ours).

The patentee then, after describing his metallic channel rim, states:

> "In this groove or channel I place a rubber tire (c) which is of peculiar shape."

The patentee then goes on and describes this peculiar shaped tire precisely and exactly, itemized and in detail, as follows:

> "It is provided throughout its length with openings c' c', through which are passed retaining wires d. These retaining wires are separate and independent and extend entirely through the openings c', and the ends of each of said retaining wires are united together after the rubber has been compressed endwise on said wires, thus forming two independent and continuous retaining wires within the rubber tire, the ends of which, by reason of the compression, are brought together so as to entirely cover the wires and the united ends thereof.
>
> "The tire proper, c, is formed of substantially the same depth as width. The outer periphery, however, is formed on the arc of a circle of much smaller diameter than the width of

the rim, the exposed sides of the tire being formed preferably on the lines c^2, at an angle to each other and also to the flanges b′ of the wheel rim. The unexposed portion of the tire, or that portion which is inclosed within the rim, is formed of substantially the same shape as the inner channel of the rim—that is to say, it is tapered from the outside inwardly—so that the sides of the inner or unexposed portion of the tire are also formed on the lines c^3, forming with the lines c^2 an obtuse angle. The lines c^3, however, are less in length than the inside of the flanges b′, so that angle or corner c^4, between the sides c^2 and c^3, falls below the outer periphery of the flange b′ and within the channel between said flanges. The openings c′ through which the retaining wires pass are also formed within the inner or unexposed portion of the tire—that is to say, the tops of the openings are substantially on a line with the angle or corner c^4, so that the tops of said openings stand below the outer periphery of the flanges b′.

"The bottom portion of the tire is reinforced with a canvas strip c^5, which covers the entire bottom and may project slightly along the sides c^3, but does not in any case extend up as far as the angle or corner c^4.

"The tire has been described thus minutely because the constructions described are important."

The patentee then describes the purposes of this peculiar construction prevents the tires from being forced over the sides of the flange, thus preventing cutting or grooving of the tire, and describes also the efficacy of the reinforcing strip of canvas on the bottom of the tire. It would thus seem, simply from an inspection of the patent itself, that the thing described and claimed was without patenta-

ble novelty or invention, determined simply from an examination of the patent on its face, all of the parts being old and exhibiting only a selective choice in their combination and alliance. Of course any mechanic, even an ordinary mechanic, would so mould the rubber to form the tier, and would so form a retaining flange, as not to produce a cutting edge for the destruction of the tire itself; equally of course also, if any difficulty was found in the wearing or abrasion of the tire base in the channel, would use a common well-known reinforcing strip of canvas to be applied at this point. Manifestly also, a rubber tire thus formed and located in a channel rim would run in such rim and retain its position under any stress of travel in actual use that would not produce a distorting or wrenching effect upon the tire itself. The weight of the carriage or the load itself upon the wheel and tire would all be in the direction of keeping the tire in its place and preventing its dislodgment from its flanged holding. If the wheel should run always upon a smooth asphalt pavement the tire would keep its place of necessity and would and could not roll out. Manifestly then, the only use of the two wires shown in the drawings are for the purpose of "*retaining*" the tire in its place when a force would be exerted upon it that otherwise would cause it to be displaced or rolled from its channel. Without any doubt then, these two wires will have the sole purpose only of retaining the tire in its channel under these conditions, and therefore all through the patent these wires are spoken of always as "*retaining wires.*" It will be noticed also that the patent

provides for an exact location of these wires. The drawings identify this location specifically in Figures 2 and 4, and the specification provides that the tops of the openings through which these retaining wires pass are substantially on a line with the angle or corner c^4, so that the tops of said openings stand below the outer periphery of the flanges b'. The patent provides that these retaining wires are separate and independent and extending entirely through their respective openings, "and the ends of each of said retaining wires are united together after the rubber has been compressed endwise on said wires, thus forming two independent and retaining wires within the rubber tire, the ends of which, by reason of the compression, are brought together so as to entirely cover the wires and the united ends thereof."

There is nothing in this patent from beginning to end to show how these united ends are formed or produced, except in Figure 3 that shows an enlargement by brazing or otherwise, to produce these united ends. Figure 3 evidently shows also the rubber as compressed near the united ends so that it may be made to flow back and cover the ends. It will thus be seen that metallic wires so arranged, being without elasticity or capability of longitudinal stretching, would, of necessity, do exactly what the patent claims for them, that is, retain the rubber tire itself at its base under unusual tortion or stress, and prevent the tire from being rolled out of its channel. There is nowhere from beginning to end in this Grant patent any intimation or suggestion that any strain or tightened effect is

given to these retaining wires. Indeed, if they are "retaining wires" only, they are evidently and manifestly placed there without any intention of any straining or clamping effect, but only for the purpose of standing guard and retaining the tire in place under unusual conditions that otherwise would roll the tire from its channel unless retained by the wires. We have thus been particular in pointing out the location of these wires and the evident function and operation and purpose of their presence in this tire, because it is only by a strained, unnatural and idealized condition that may be given to these wires, nowhere suggested in the patent and impossible of conception from the statements of the patent itself, that patentable novelty has been given to this patent and its validity found by the courts in this case, as will hereafter appear.

Absolute Confirmation of This Function of the Retaining Wires as Contemplated by Grant Found in This Record.

The patent, as has been seen, is entirely silent as to how the two free ends of these retaining wires respectively are to be "united." It would seem from the patent itself that the rubber tire with the two wire threads through the respective openings in the tire, were to be placed in position in the rim, and then united. As a matter of fact, however, this record shows that the tires themselves were formed of the desired length, the ends of the wires united and then the tire forced over the flanges and into the rim, this being possible by reason of

the entire periphery being available for this purpose, and the relation of the wires to the tire being fixed by these openings. It is, of course, equally obvious that the force which would be necessary to spring or jump the tire onto the wheel rim when the entire periphery of the rim was available for that purpose—that such force could not be present in any actual use of the tires to spring or jump the tire out of the rim, as the weight of the vehicle and load is always directly above the contact portion of the tire with the ground or street pavement in travel. That Grant so "united" the ends of the "retaining wires" and jumped the tire into the rim is shown by complainant's leading practical witness in this record. (Rec., 75; X-Q. 131.):

> "But in the early beginning of putting on these Grant tires it was the universal custom to fasten the ends of the wires and complete the tire before jumping over the rim, was it not?
>
> "A. Yes, sir; to my knowledge that was the first way of applying them at the start."

Antecedent and Co-Temporaneous Litigations Concerning This Grant Patent.

This patent has had a stormy career in the courts, beginning several years over a decade ago, and continuing until the present time, the contest raging in extent in the Second, Sixth and Seventh Federal Circuits. The litigations identified prior to this case are as follows: The patent was sustained in the Second Circuit by Judge Thomas (*Rubber Tire Wheel Co.* v. *Pneumatic Wagon Wheel Co.*, 91 F. R. 978); in the Sixth Circuit (N. Dist of Ohio)

by Judge Wing, unreported; in the Fifth Circuit by Judge Newman (*Consolidated Rubber Tire Co.* v. *Finley R. T. Co.*, 116 F. R. 629). It was held invalid by the Court of Appeals, Sixth Circuit, in *Goodyear Tire & R. Co.* v. *Rubber T. W. Co.*, 116 F. R. 363, and in *Rubber Co.* v. *Victor Tire Co.*, 123 F. R. 85, and by Judge Anderson in the Seventh Circuit, District of Indiana, unreported. A certiorari to review the decision of the C. C. A., Sixth Circuit, was denied, 187 U. S. 641. The patent was also indirectly involved in the decision of *Rubber Tire W. Co.* v. *Milwaukee R. Works*, 142 F. R. 531. It came before Judge Platt in the Second Circuit in the Firestone case, 147 F. R. 739, and was again sustained, and upon the appeal from his decision the Court of Appeals' opinion in that case, 151 F. R. 237, was rendered.

Petitioner's Defenses to the Grant Patent in Suit and This Action.

We have deemed it best, however, before presenting to the court the opinions of the Second Circuit Court of Appeals and of the Court of Appeals of the Sixth Circuit, discussing all of these questions relating to the validity and scope of the Grant patent, to present to this court the defenses in this case separately and singly, from the discussions of the patent in the several litigations, as an independent discussion and presentation of the facts as present in this case, as it may better enable this court to determine the rightfulness of the diametrically opposite conclusions of the two circuit courts

of appeal which have passed upon the principal questions in this case.

The defenses to this Grant patent in this action may be aligned and epitomized as follows:

I.

The invalidity of the Grant patent is shown and assured by the old art.

II.

The Grant patent rightly construed, the petitioning defendant does not infringe.

III.

The device proceeded against as an infringement having been manufactured and sold in the Sixth Circuit where and since this Grant patent has been declared invalid, such device cannot be proceeded against in the Second Circuit as an infringement.

We will now take up and dispose of these defenses in the order above enumerated. The old art is represented in this case by a separate book marked "Old Patent Exhibits." Every one of these patents relate directly or indirectly to solid rubber tires upon wheel rims, and follow each other in rapid and unbroken succession from nearly a third of a century ago down to the present time. The drawings of all of these patents tell their own story and simply a cursory inspection of them shows the truth

of the assertion that at the time of Grant's appearance in this industry the old art was crowded with numerous prototypes and predecessors of this Grant tire, with every thought and suggestion of novelty and utility that can be found in the drawings and specifications of the Grant patent, or even in the idealized contentions as to the patent by the visions and dreams of the experts and counsel for the patent.

We have, however, in compliance with the labor-saving rule laid down in this court in *Topliff* v. *Topliff*, *supra*, selected two patents only of this old art, believing that these patents anticipate everything of invention in this Grant patent, and that if they do not show anticipation, none of the others will show it, and if they do anticipate the Grant patent, it is entirely immaterial whether the others do or not. The two patents so selected are the last two English patents in the book of "Old Patent Exhibits," and are British patents to Willoughby, the one of March 26, 1892, No. 5,924, and of October 10, 1892, No. 18,030, and are found upon pages 136 and 141 of the book of "Old Patent Exhibits."

The record in this case is replete with a large number of old patents—United States and foreign—relating to solid rubber tires, with a wide variety of forms and shapes, and of the application of these solid rubber tires to a wide variety of metal rims, also of various forms and shapes. Some of these old patent exhibits disclose an approximation to this Grant patent in suit, as to parallelisms of construction and operation, so closely that there would

really seem to be no opportunity for substantial differences, either as to construction or result, between the Grant tire and patent and the old art.

In this case the mechanical expert of the petitioning defendant—the Diamond Rubber Company of New York—Mr. Samuel N. Pond, selected from this old art the two Willoughby British patents, above identified, as of prime importance in anticipating every thought and shade and idea of invention or otherwise, disclosed in the Grant patent. Mr. Pond so stated upon cross-examination. (Rec., p. 179; X-Q. 18 and A.) Mr. Pond's analysis and presentation of these two British Willoughby patents is found upon (Rec., pp. 123-8.)

We desire to associate ourselves with and adopt the testimony of Mr. Pond, and his analysis of these English Willoughby patents, and his presentation of them as complete defenses to the Grant patent in suit, and we do this for the reasons, in the first instance, that Mr. Pond's presentation of these patents is a fair and logical review of these anticipating patents, and their anticipations of Grant, with convincing reasons given therefor, and for the further reason that in the litigation upon this Grant patent in the Court of Appeals of the Second Circuit, that court seemed to have accepted, as a fatality to the contentions of the defendant in the Firestone case, erroneous and wrong conclusions of defendant's single expert witness examined in that case, and therefore found against the defendant, by reason of admissions and statements made by the mechanical expert exam-

ined in defendant's behalf, and to the apparent exclusion of any consideration of the old prior art, aside from the single instance of selection of this expert witness, the patent there selected in the Firestone case being the Letta patent, not relied upon or referred to, except perhaps incidentally, anywhere in this record.

For these reasons, at the risk of appearing to give offense by extended quotations from expert testimony, we here quote the salient part of Mr. Pond's deposition, found in Rec., pp. 123-8, as follows:

> "British Patent to Willoughby, No. 5,924, March 26, 1892. British Patent to Willoughby, No. 18,030, October 10, 1892.
>
> "These two patents, and especially the earlier, I regard as of prime importance in relation to the question of the novelty or otherwise of the alleged invention of the Grant patent in suit at the time the application therefor was filed in the Patent Office. Referring first to No. 5,924, the patentee states: 'My invention is an improved method of securing rubber tyres to their rims, or in the case of a built-up air-inflated tyre, of securing the outer casing of the tyre to the rim.' The patentee then proceeds to describe the novel feature of his invention as consisting of one or more flexible metal coils, which may be either continuous circles of coil or lengths of coil interpieced with one or more length of addition metal rod or wire (uncoiled), or formed of lengths of coil alternating with straight or uncoiled lengths of their own metal rod in its uncoiled condition. The patentee states that these tire-fastening rods or coils may be passed through a hole formed lengthways in the rubber tire with their ends united; or they may be molded with the rubber

of the tire in the molding operation. In the drawings of the patent are shown a variety of forms of channel rims. For instance, in Figs. 5 and 7[a] is shown a rim in which the side flanges are at right angles or perpendicular to the base of the channel; in Figs. 8 and 8[a] is shown a rim in which the side flanges incline inwardly of the channel; and in Fig. 8 is shown a rim in in which the side flanges incline outwardly of the channel. In all of these cases, the inner or base portion of the tire is fitted to a snug seat in the channel. Regarding the manner of application of the tire to the channel rim, the patentee has this to say, on lines 28 to 34 of page 2 of the complete specification:

> " 'To apply my invention to ordinary vehicle wheels I select those already tyred with a "carmont" or somewhat similar shaped channel rim as in Figs. 5, 8, and 8[a], or in the case of new wheels, I provide them with a channel tyre and into this channel I spring my hooped rubber and coil combination or lay the rubber and coil combination around the wheel in the channel before the ends are united and by forcibly drawing the ends of the coil or coils together and uniting them I form the tyre upon the wheel without having to stretch it over the flanges of the channel rim.'

"In Fig. 8[a] of this patent I find clearly shown a construction which answers claim 1 of the Grant patent in suit in every detail. In this figure I find, as part of a vehicle wheel, 'a metallic rim with angularly projecting flanges to form a channel or groove with tapered or inclined sides.' I also find 'a rubber tire, the inner portion of which is adapted to fit in said groove or channel and the outer portion having sides at an angle to the inner portion, the angle or corner between the outer and inner portions being located within the outer peri-

phery of the flanges'; and I also find 'independent retaining wires passing entirely through the inner portion of said tire and also within the outer peripheries of the flanges.' In claim 1 of the patent in suit the expression 'angularly projecting flanges' has reference to the rim on which the flanges are formed. In a broad sense the term 'angularly projecting,' as applied to a flange, is tautological. Any flange projects at an angle to the surface on which it is formed, or it is not a flange. It is my understanding and belief, however, that in the claim I am considering the patentee intended to designate and point out flanges which were disposed at an angle to the plane of the wheel; in other words, to distinguish from a structure like that shown, for instance, in the old Greene patent No. 169,100, of October 26, 1875, in which the flanges are parallel with the plane of the wheel or normal to the base of the channel. In accordance with this interpretation, the claim would define a construction in which the flanges or side walls of the channel leaned either inwardly of the channel, as shown for instance in Fig. 8ª of the British patent I am discussing, or as shown in the Grant patent in suit, in which the flanges or side walls lean outwardly of the channel. Similarly, the expression 'outwardly projecting flanges at an angle to the plane of said wheel so as to form a channel or groove having tapered or inclined sides' in claim 2 of the patent in suit fails to differentiate in terms from the structure shown in Fig. 8ª of the British patent under consideration. In said figure the flanges project outwardly of the metallic rim, and they are at an angle to the plane of the wheel so as to form a channel or groove having tapered or inclined sides. I therefore find in the said Fig. 8ª of the British patent a complete answer in terms to claim 2 of the patent in suit, with the single

exception of the reinforcing strip of fibrous material at the bottom of the tire and wholly within the flanges, which was old in the Desparre patent, as I have hereinbefore pointed out, and the addition of which to the tire of this British patent would not, in my opinion, involve a scintilla of invention.

"It is, and always has been, the rule of the Patent Office in passing upon the claims of applicants for patents to construe a claim as broadly and comprehensively as the language of the claim will warrant without doing violence to the usual and accepted meanings of the terms employed; and if, tested by this rule, a claim is not distinguished from a prior art structure, the applicant is required to so change the language of the claim as to make it impossible of reading upon the prior art structure; and this no matter how far apart in substance the structure sought to be defined by the claim and the prior art structure may be. In my own experience in the Patent Office I frequently had occasion to advise an applicant that one or more of his claims was 'met in terms' by a prior art structure; not meaning thereby that the subject-matter of the claim was necessarily unpatentable over the prior art structure, but that the language employed in definition was too comprehensive and sweeping, and must be reformed so as to be incapable, in its widest significance, of application to the prior art structure. If my interpretation of the terms of the claims of the patent in suit, as above given, is correct, these claims violate the rule above referred to.

"But even if, as appears to have been the case in the litigation thus far over this patent, the claims be given the benefit of a narrower construction than the plain meanings of their terms imply, and be interpreted as covering only a form of channel in which the flanges or

side walls lean outwardly of the channel, the only change necessary in Fig. 8[a] of the British patent under consideration to maintain the anticipating effect of said figure is to incline the side walls outwardly relatively to the channel and correspondingly vary the inclination of the sides of the inner or base portion of the tire to fit the same in the manner shown, for instance, in Fig. 30 of the British patent No. 18,030, granted to the same patentee. To do this would not, in my opinion, involve anything higher in the way of an intellectual effort than is represented by the ordinary and expected skill and judgment of the mechanic familiar with this art. The prior art as thus far considered by me shows that long prior to the entry of the patentee Grant into the field, the particular cross-section of channeled rim to seat the tire was simply a matter of selection and choice. The rim having inwardly turned side walls or flanges had a clinching effect on the base of the tire, and held the latter more securely against radial displacement; but, on the other hand, it was more difficult to get the tire into its seat. The rim having outwardly leaning side walls or flanges afforded more facility for getting the tire on and off, and was not as hard on the tire in point of wear and abrasion, but required more in the way of fastening devices to keep the tire in place in service. The rim having a rectangular channel was a compromise between the two, sharing in a measure the advantages and disadvantages of both. This patentee Willoughby, in the two patents under consideration, discloses all three of these forms, with tire bases shaped to fit all forms. For instance, in Fig. 8[a] of No. 5,924, he shows the inwardly turned form; in Figs. 15, 17, 26, 30 and 31, of No. 18,030, he shows the outwardly turned form; and in Fig. 7[a] of No. 5,924, and Figs. 21, 22, 23, 24, 25, 27, 29, 32, 33 and 34 of No. 18,030,

he shows the intermediate or rectangular form."

Counsel for the Grant patent, in one or two of the other litigations represented by the exhibit records, have attempted to meet these Willoughby patents by the contention that the retaining wires of Willoughby, with their one or two intermediate coils for securing a certain amount of resiliency are not the retaining wires of the Grant patent, because the enlargement of the Willoughby retaining wires would make it difficult to thread the wires through the openings in the solid rubber tire, and when there would tend to abraid the wire in actual use. A complete reply to this suggestion is found in the Grant patent itself and in Grant's testimony, to the following effect: The Grant patent shows that exactly the same protuberances appear in the retaining wires of the Grant patent, as shown in Fig. 3, and shows an enlargement of the wires at the place of uniting the same, substantially as shown as to size and location in the Willoughby patent. Grant also in his deposition described, as one of the methods of uniting the two ends of the wires, by twisting them together, making, as he says, an enlargement necessarily twice the size of the wires. (Rec., p. 634, Q. 20.)

As we have seen repeatedly in this record, and in Grant's testimony and the testimony of the above witnesses, the rubber of the tires continually crept in the earlier tires, and of course by creeping passed over these enlargements in the wires at the united ends. From Fig. 3 of the Willoughby patent it

does not appear that there is more than one enlargement by the coil of the wire in each of Willoughby's retaining wires, and probably one would be sufficient for the purpose desired by Willoughby. The proposition is then self-evident that no distinction could be drawn between Willoughby and Grant by reason of these enlargements in the retaining wires.

We herewith, for convenient reference of the court, reproduce the figure drawings of the Willoughby patents, as identified by Mr. Pond in his deposition, also the drawing of Fig. 3 of the Willoughby patent No. 5,924—the drawings speaking for themselves. The drawings of the two Willoughby patents just referred to are more fully identified as follows by the reproduction from the cuts of the Willoughby patents themselves. The patents themselves being found respectively in Book of Old Patent Exhibits, pages 140-148.

The drawings of the Willoughby patent of March 26, 1892, No. 5,924, as to the flanged channel, show the flanges in three different positions as to the solid rubber tire. Fig. 8 shows the flange at right angles of the rim; Fig. 8^a shows the flanges somewhat inwardly inclined with the two retaining wires, and Fig. 7^a shows the flanges vertical with two retaining wires, the retaining wires in Fig. 8^a being below the outer periphery of the flanges, and the two retaining wires of Fig. 7^a being centrally located, as to their openings, with the periphery of the flanges. In Fig. 6, however, which is a pneumatic tire (a tire when highly inflated, is as solid

as a rubber tire), the flanges are outwardly flaring and the two retaining wires are substantially below the periphery of the flanges.

FIG. 3



FIG. 6.



FIG. 7a.



FIG. 8.

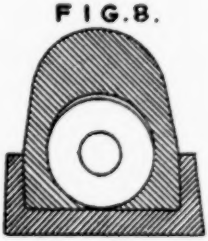


FIG. 8a.



Willoughby March 26, 1892, English Patent.
Figs. 3, 6, 7a, 8, 8a.

When we turn now to the Willoughby October 10, 1892, patent, No. 18,030, we find in addition to the right angle flanges upon the rim, and illustrated,

five in number, the precise outwardly flaring flanges of the Grant patent, and in five of the figures shown are the two retaining wires of the Grant patent; one of these figures showing the retaining wires above the periphery of the flanges, another substantially on a line with the periphery of the flanges, and three of the figures showing the retaining wires substantially below the periphery of the respective flanges. We herewith reproduce these figures in confirmation of this statement:

FIG. 15.

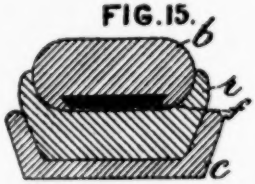


FIG. 17.

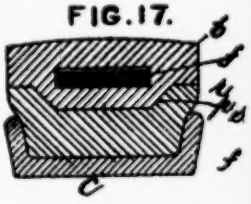


FIG. 26

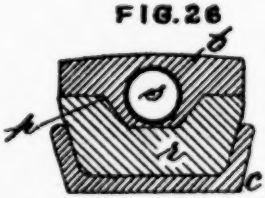
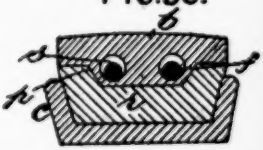


FIG. 30.



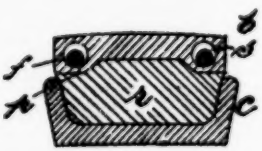


FIG. 31.

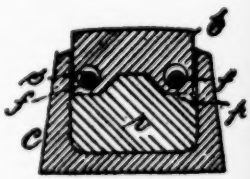


FIG. 32

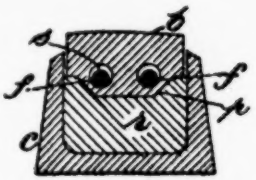


FIG. 33.

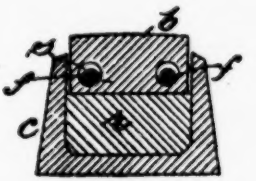


FIG. 34.

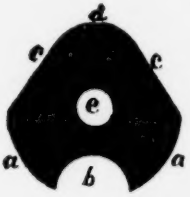
WILLOUGHBY OCTOBER 10, 1892, ENGLISH PATENT.
Figs. 15, 17, 26, 30, 31, 32, 33 and 34.

It is a curious and significant fact also, that if any party should really desire a lifting or tilting action in these tires of the Willoughby and Grant types, the only way to affect the same would be to put a resilient coil in the retaining wires, so that the wires could yield by the resiliency of the coils upon a sufficient force applied in any way, either sidewise or endwise, to remove the tire from the rim.

It may be of interest in this connection to call the attention of your Honors, as illustrative of the entire absence of inventive thought or conception in this Grant patent, two or three of the old patents, illustrating solid rubber tires, even as to the particular outlines and configuration of angles and relation of angles so minutely described in the Grant patent.

Coop's British and American Patent No. 20,678, 1891.

This patent shows a solid rubber tire with a central opening or space that could be utilized for a single retaining wire. This tire placed in one of the outwardly flaring rims of Willoughby would meet every suggestion of Grant, as is apparent by the following cut taken from the Coop's patent (page 2, Book of Old Patent Exhibits):



Owen Patent No. 365,091 of June 31, 1887.

This patent shows several forms of solid rubber tires in outwardly flanged rims, of substantially the peculiar construction of Grant, and if you thread these old retaining wires through openings in these peculiar shaped tires, as in Grant, you will have the Grant patent, which can be seen simply at a glance at Figs. 5 and 6 of the Owen patent, page 44, book of "Old Patent Exhibits," here shown:

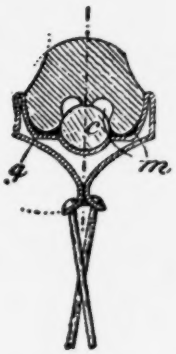


Fig. 5.

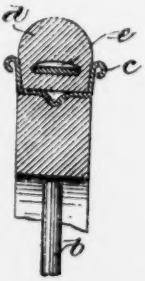


Fig. 6.

Elliott Patent No. 440,702 of November 18, 1890.

This patent shows a solid rubber tire in an outwardly flanged rim, but with a central retaining band, located below the periphery of the flanges, to hold the tire in place, instead of two retaining wires. This fact is evident by an inspection of Fig. 2, here shown, of the Elliott patent in the book of "Old Patent Exhibits," p. 66:

Fig. 2.



Blosser & Kunkle Patent No. 529,474 of November 20, 1894.

This patent shows flanged rims both at right angles and flaring. A solid rubber tire located therein with two independent retaining tires. It is true in this patent that the retaining wires are located in openings not on a line with the periphery of the flanges, but closely approximating the base of the tire, and that the angles of the solid rubber tire are substantially different from those described in Grant, but there are no differences between Grant and Blosser & Kunkle except these angles. We believe that the attorneys for Grant claim that in one of the other litigations Grant attempted to swear back the date of his invention beyond the date of the application for this patent. This Blosser & Kunkle patent is found on page 96 of the book of "Old Patent Exhibits."

Welch British Patent No. 14,563, September 16, 1890.

This patent shows several forms of solid rubber tires held by retaining wires, with two independent retaining wires holding the tire in various forms to the channel rim, illustrated in drawings on page 124 in the book of "Old Patent Exhibits." Figs. 2 and 6 are here reproduced:

Fig. 2

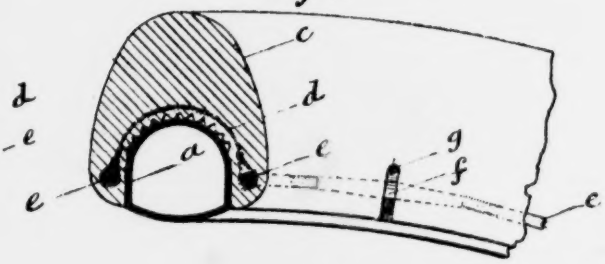
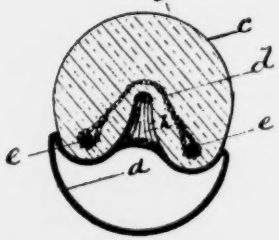


Fig. 6.



Other patents could be enumerated, but these have been given and illustrated simply to show that at the time Grant entered this field in the manner shown and patented, there was nothing left for him to invent or disclose beyond that which had been fully illustrated, shown and described in the prior art, except as to wholly unimportant detail of exact angles.

We turn now to the second defense to this action, namely:

The Grant Patent Rightly Construed, the Petitioning Defendant Does Not Infringe.

While it may be true that in the antecedent litigations over this Grant patent in the Second and Sixth Circuits, the defendants in those cases used the precise and exact device, as to configuration, angles and proportions of this Grant patent, used the same mold, and therefore by so doing may have, of necessity, infringed the patent; still, in this action, this patent closely analyzed as here presented and as construed, as here contended for, if to be confined to exact angles and relations of angles and precise configuration of parts—so construed—the petitioning defendant's device here present as introduced by the complainant respondent, the Consolidated Company, does not infringe. It may be that, to a certain extent, the aid of calipers and a magnifying glass are necessary to so find, but such instruments are also necessary to find from said patent any semblance of difference and distinguishment from the old art. We adopt in this connection and here quote in full from the testimony of petitioning defendant's mechanical expert witness, Mr. Pond, as to this matter of non-infringement, who handles this question as a question of fact. The testimony of Mr. Pond is somewhat extended as to this fact of non-infringement, for the reason that Mr. Pond gives accompanying reasons for his statements somewhat fully, but the reasons found, clearly substantiate the statements made. The construction of this Grant patent is, of course, a question of law for your Honors, but if your Honors shall con-

strue this Grant patent as here contended for, we believe your Honors will find that the fact of non-infringement of either claim of the patent must necessarily follow from such construction, and for the reasons given in the deposition of petitioner's mechanical expert, and we leave this question of non-infringement with this presentation, and with the further reason of the recognized rule of law laid down by this court to the effect that the burden of proof to establish infringement rests upon the complainant. Mr. Pond's deposition is found on Rec., pp. 171-8, and reads as follows:

"A. I will first consider the smaller exhibit, 'Section of Diamond Rubber Company Tire,' which apparently is a section cut from the periphery of the larger exhibit, marked 'Complainant's Exhibit Defendant's Rubber Tire.' I find in this exhibit the three fundamental mechanical elements of a solid rubber tire, a channel rim and a pair of retaining wires which I find in the Grant patent in suit, and which, as I have already pointed out, were borrowed by the patentee Grant, both individually and in combination, from the prior art long antedating his alleged invention. Considering first the rim, I find a considerable difference between its specific structure and the specific structure of the tire of the patent in suit. In the rim of the patent in suit the side walls or flanges diverge at a considerable angle from the vertical, being about twenty-one degrees by actual measurement; and both the inner and outer walls of the side flanges thus diverge, being substantially parallel. The side flanges of the defendant's rim are of different form and divergence. The inner walls which lie next to the tire exhibit a divergence of less than ten degrees from the vertical, while their outer walls are rounding or

convex, and, throughout their upper or outer halves, lean inwardly of the channel at an angle of about ten degrees. The mean radial line of the flange in defendant's channel is about perpendicular or normal to the base of the channel. Hence, it cannot be said of the defendant's channel that 'these flanges *b'* extend outwardly from the rim *b* at an angle,' as the complainant's tire is described in the specification of complainant's patent. Furthermore, the inner walls of the side flanges of the exhibit of defendant's tire which I am considering are slightly hollowed or concaved in cross-section, whereas the corresponding walls in the patent in suit are straight.

"Considering next the form and structure of the tire itself, I also find several differences between the tire of the patent in suit and the tire of the exhibit under consideration. The tire of the patent in suit has on its outer or exposed portion straight sloping sides (in cross-section) fully twice the length of the oppositely sloping or inclined sides of the base portion of the tire, and forming an angle of 137 degrees with the latter, by measurement. The defendant's tire has on its outer or exposed portion much shorter approximately straight sloping sides but slightly longer than the sides of the inner or base portion and formed at an angle of 162 degrees with the latter, by measurement. Furthermore, I do not find in the sample of defendant's tire under examination any clearly defined angle or meeting point between these inner and outer sides, as in the complainant's patent. In the molding of the tire of the exhibit of defendant's construction there appear to have been formed at the junction of these outer and inner sides small ribs or fins which appear to have been smoothed or planed down more or less at various points, forming at such cross-sectional points short radial lines connecting the oppo-

sitely sloping lines marking the cross-section of the inner and outer portions of the tire. The effect of this is to make these inner and outer lines that define the cross-sectional form of the sloping sides of the inner and outer portions of the tire practically continuous, so that it is impossible to say where the corner or angle between them is located or whether it exists at all. Of course, the fact that both the inner and outer sides of the tire in the defendant's structure much more nearly approach the vertical or radial line of the tire makes the obtuse angle between them much larger and nearer the vanishing point than in the case of the complainant's patent in suit.

"In the patent in suit the openings or holes through which the retaining wires pass are shown and described as 'formed within the inner or unexposed portion of the tire—that is to say, the tops of the openings are substantially on a line with the angle or corner c^4, so that the tops of said openings stand below the outer periphery of the flanges b'.' Insofar as I am able to locate the angles or corners on the sides of the section of defendant's tire introduced in evidence, I do not find that this is at all correctly descriptive of the latter. The openings for the wires in defendant's tire are apparently not more than half within the inner or unexposed portion of the tire, their upper or outer halves lying within the outer or exposed portion of the tire. Neither do I find that the tops of these openings in defendant's tire 'stand below the outer periphery of the flanges,' but are just about on a line connecting the outer peripheries of the flanges.

"In both complainant's patent and the exhibit of defendant's tire under examination, I find a strip of canvas on the base of the tire and extending partly up on the unexposed sides of the tire.

"Having thus pointed out such similarities and differences as I find between the Grant patent in suit and the section of defendant's tire which I have examined, I will turn to the claims of the patent in suit and compare these with the exhibit 'Section of Defendant's Tire.' Preliminary to this however, I may say that I find no substantial differences between the larger exhibit, 'Complainant's Exhibit Defendant's Rubber Tire' and the smaller exhibit 'Section of Diamond Rubber Company Tire,' which, as above stated, apparently has been cut out of the first and larger exhibit. The excised section appears to be a fair and accurate representative of the complete exhibit from which it is taken. In comparing the claims with these exhibits, I shall consider the claims at their face value, and without attempting to place any construction or interpretation upon them in respect to scope beyond such as I think was clearly intended by the patentee.

"Considering first claim 1, I note that the claim is addressed to and covers a complete vehicle wheel; and the first element recited in the claim as a part of said wheel is 'a metallic rim with angularly projecting flanges to form a channel or groove with tapered or inclined sides.' As I have already pointed out, this description of the rim is somewhat vague and indefinite. The description does not disclose with what the projecting flanges form an angle; nor does it disclose whether the taper or inclination of the sides of the channel leans inwardly or outwardly of the channel. Assuming, however, that the drawing and specification of the patent explain what is meant by this description in the claim (since it is the function of drawings and specifications to explain and clarify ambiguities and uncertainties in the claims), the matter above quoted from the claim refers

to a metallic rim having side flanges which lean outwardly of the channel at an angle to the plane of the wheel. I do not find in the exhibits of the defendant's tire offered in evidence a metallic rim completely responsive to this definition. In the defendant's wheel the rim has substantially radially projecting flanges which, considered as a whole, are substantially parallel with the plane of the wheel; each of these flanges having an inner wall that leans slightly outwardly of the channel and an outer wall that leans to about the same extent inwardly of the channel. In order to make this element of the claim readable upon the defendant's tire as well as upon the tire of the complainant's patent, it would be necessary to change the reading of this element in the claim somewhat as follows: *A metallic rim with flanges the inner or tire-engaging walls of which are tapered or inclined so as to lean outwardly of the channel.* I do not find, however, such a definition of the rim in the claim.

"The second element of the claim is 'a rubber tire;' this element is limited and qualified to the exent that its inner portion 'is adapted to fit in said groove or channel' and its outer portion has 'sides at an angle to the inner portion, the angle or corner between the outer and inner portions being located within the outer periphery of the flanges.' In the exhibits of the defendant's tire submitted there is a rubber tire having inner and outer portions; but I do not find that the inner portion either fits or is adapted to fit the groove or channel of the rim. The inside width of the channel of the rim in the exhibits of defendant's tire is fully an eighth of an inch wider at all points than the width of the base of the tire, which would permit such an extent of lateral shifting and wobbling of the tire in the rim and such an easy accumulation of dirt and other deleterious mat-

ter between the tire and the rim as to make the tire practically useless in service. As to whether or not in the defendant's tire the sides of the outer portion form an angle with the sides of the inner portion, and whether or not such angle or corner is located 'within the outer periphery of the flanges' it is difficult to determine. At some cross-sectional points on defendant's tire there appears to be an ill defined angle or corner, and at other points there are two such ill defined angles or corners with a short radial line between them. Insofar as I can locate these angles or corners they appear to vary on defendant's tire between a point substantially opposite the outer periphery of the flanges and a point slightly inwardly of the outer periphery of the flanges.

"The final element of the claim is defined as 'independent retaining wires passing entirely through the inner portions of said tire and also within the outer peripheries of the flanges.' Defendant's tire has independent retaining wires; but they do not pass entirely through the inner portions of the tire. They clearly intersect the line between the inner and outer portions; lying partly in the inner portion and partly in the outer portion. As regards the location of these wires relatively to the outer peripheries of the flanges, they appear to be just about tangent on their outer sides to a line drawn between and connecting the outer peripheries of the flanges.

"While, therefore, I find in the exhibit of defendant's wheel and tire in evidence the three mechanical elements of claim 1 of the patent in suit, I do not find any or all of these elements possessing the limitations of structure and relative relation to each other as specified in the claim; and hence I do not find the alleged invention and device of the patent in suit as defined in claim 1 thereof to be present in the exhibits of the defendant's construction in evidence.

"Referring to claim 2 of the patent in suit, this claim is also addressed to and covers a complete vehicle wheel; and the first element of the wheel structure as recited therein is 'a metallic rim with outwardly projecting flanges at an angle to the plane of said wheel so as to form a channel or groove having tapered or inclined sides.' This is a slightly more specific definition of the flanges than is contained in claim 1, and yet it is not entirely free from uncertainty and ambiguity. The flanges are defined as to location as 'at an angle to the plane of said wheel so as to form a channel or groove having tapered or inclined sides.' Obviously this definition applies with equal accuracy to a construction in which the flanges lean inwardly of the channel as, for instance, in Fig. 8[a] of the Willoughby British patent No. 5,924 of 1892. As to 'outwardly projecting,' the claim does not state whether the flanges project outwardly relatively to the rim itself, or project outwardly relatively to the plane of the wheel. However, this definition of the flanges is, in my judgment, equally inapplicable with the definition of claim 1 to the flanges of the defendant's structure, and would require the same modification to make it readable upon the defendant's structure as suggested in my discussion of claim 1.

"The definition of the second element of the claim, 'rubber tire, the inner portion of which is adapted to fit in said tapered groove or channel, and the outer or exposed portions formed at an angle thereto, the angle or corner between the said portions being placed within the outer periphery of said flanges' is substantially the same in substance and scope as the definition of the same element in claim 1, and does not apply to the defendant's structure for the reasons already stated in the comparison of claim 1.

"The third element of the claim is 'openings extending entirely through the unexposed por-

tion of said tire.' Strictly and technically speaking, an opening, having no material or tangible existence, does not and cannot constitute a mechanical element in a combination; but what the claim means, evidently, is that the tire is provided in its unexposed portions with openings extending entirely therethrough, which feature is, of course, necessarily a feature of claim 1 also. I do not find that in the defendant's structure these openings (for the retaining wires) extend entirely through the unexposed portion of the tire, being located partly in the unexposed portion and partly in the exposed portion of the tire.

"The fourth element, 'independent retaining wires in said openings,' and the fifth element 'a reinforcing strip of fibrous material placed at the bottom of said tire and wholly within said flanges,' I find to be present in the defendant's construction.

"While, therefore, as regards claim 2 of the patent in suit, I find in the defendant's construction the three fundamental elements, taken from the prior art, on which the patentee Grant has built his alleged invention, I do not find in the defendant's construction the first, second and third elements of claim 2 of the patent in suit in the form and relative arrangement as defined in said claim, and hence I do not find in the defendant's construction the subject-matter of said claim, considered as an entirety.

"Briefly summarizing my conclusions, for the reasons above given I do not find the alleged inventions, combinations and devices of either of the claims of the Grant patent in suit embodied in or contained in either of the exhibits introduced in evidence professing to represent the defendant's tires."

The diametrically opposite findings and conclusions between the Circuit Court of Appeals of the Second Circuit and the Circuit Court of Appeals of the Sixth Circuit, as shown by the respective opinions.

FIRESTONE CASE, SECOND CIRCUIT, 157 F. R. 237.

The Circuit Court of Appeals in the Second Circuit, in the Firestone case, made the following statements relating to the Grant patent and tire:

> "The Grant tire has the capacity which no other possesses of readjusting itself and yielding to severe lateral strain without tearing or abrasion of the rubber, or injury to any of the parts."

The court, further along in its opinion, says:

> "It now appears that the feature which secures patentability is inherent in the patent, and the specification is so clear and specific that no intelligent mechanic can follow Grant's directions without securing the tipping action which inheres in no other tire. This feature is neither an accident nor an obscure property; it exists in every wheel on which is mounted a tire which follows the teachings of the patent. * * * The specification is addressed to those skilled in the art; it is enough that they understand it.
>
> * * * * * *
>
> "That the capacity for readjusting itself when subjected to lateral strain is inherent in the Grant tire, seems perfectly plain and was demonstrated at the argument even by hand pressure applied to the tire at a point where the rubber had been cut down so as to expose the wires."

GOODYEAR CASE, SIXTH CIRCUIT, 116 F. R. 363, 123 F. R. 85.

The Circuit Court of Appeals of the Sixth Circuit, in the "Goodyear case," speaking upon this precise subject matter, even as to detail, says, referring directly to the alleged tipping capacity of the Grant tire:

> "Oddly enough, the new mode of operation to which the novelty of Grant's combination is attributed is not mentioned in the specifications, and its discovery is due to the keen optimism of professional experts.
>
> * * * * *
>
> "That this capacity for side tipping or lateral movement under violent lateral strain, is an operative function inherent in the particular arrangement of the old parts constituting Grant's combination, is dependent wholly upon expert opinion. Its actual presence, from practical experience or observation, is not shown. Neither are the experts able to deduce this function from the instructions of the patent concerning the construction of the wires, for the patent is silent in respect, not only as to the function itself, but as to the proper tension of the wires in order to obtain it beneficially.
>
> * * * * *
>
> "The specification gives no hint of this alleged joint action of all the parts to produce the tipping action, or of the advantage therefrom in preventing the tearing or cutting of the rubber from the wires. If this capacity for side movement be a beneficial function, plainly inherent in Grant's combination and arrangement of old parts in relation to each other and not a mere 'obscure property lurking in some accidental corner of the device,' it was not essential that the patentee should point it out as one of the advantages of his structure.
>
> * * * * *

"But this is not so in respect to the undescribed function of the Grant device, for he neither mentions any such capacity, nor describes any such arrangement of his retaining wires as will secure a capacity for 'rising or yielding' under lateral strain as a necessary result of the tension so provided for. The problem, so far as the public is concerned, is to remain a problem.

* * * * *

"We learn now that this capacity for any beneficial yielding is dependent upon the wires being properly adjusted originally, and that this proper tension depends upon the right adjustment by the workman. If this tipping capacity had been pointed out and even this indefinite direction given by the patentee, as to the mode of securing the operation, the patent might possibly be saved, though this we need not consider. But neither the advantage of such a function nor any hint that it is in any wise dependent upon the normal tension of the retaining wires is to be found in the patent.

* * * * *

"Grant has not disclosed this alleged capacity of his structure for 'rising or yielding' on one side under severe lateral strain, nor has he disclosed any method of securing the same by the proper arrangement of the retaining wires to produce the proper tension upon which this capacity, in any beneficial sense depends."

Really no substantial difference between the testimony in the "Goodyear Case," and the testimony in the "Firestone Case," as to the presence of this alleged "tipping capacity," in the Grant patent, and tire.

In reading the opinion of Appellate Court in the "Firestone case" it would seem that that court had taken it for granted that in the "Goodyear case"

there was no statement of facts, as to the presence of the tipping capacity in the Grant patent and tire, but that such tipping capacity, as to any fact before the court, resided solely in the "keen optimism of the professional expert." This was an error upon the part of that court in the "Firestone case." *Of course it would seem to be axiomatic that this tipping capacity,*--"the feature which secures patentability is inherent in the patent, and the specification is so clear and explicit that no intelligent mechanic can follow Grant's directions without securing the tipping action, which inheres in no other tire,"—*that if this statement is true, as asserted by the Appellate Court in the Firestone case, it must have, of necessity, been equally true in the Goodyear case.* The opinion in the "Firestone case" stated that the "capacity for readjusting itself, when subjected to severe lateral strain, is inherent in the Grant tire, seems perfectly plain and was demonstrated at the argument, even by hand pressure applied to the tire at a point where the rubber had been cut down so as to expose the wires,"—if this "tipping capacity is inherent in the tire," and "perfectly plain," then, of course, this capacity was not as apparent in the Goodyear case, as in the Firestone case, and the two records are identical upon this point. An examination of the record in the Goodyear case shows also that the testimony in that case, as appears in the deposition of the patentee Grant, and of his expert Livermore, the same witness and expert quoted from in the opinion of the Court of Appeals of the Second Circuit, in this case, that such witnesses testified clearly and unequivocally that the Grant tire had the capacity to tilt and reseat itself whenever receiving a severe side strain.

The Patentee Grant Testified in the "Goodyear Case" Upon This Point.

Upon June 15, 1905, the patentee Grant in the Goodyear case, as shown in the "Exhibit Goodyear Record," testified emphatically and clearly upon this point, as follows:

> *"It would fill the channel so as to leave no space for the gathering of dirt or gravel, but still by employing this particular shape it would allow the tire to readily and easily reseat itself whenever receiving a severe side strain, which is the peculiar construction of the tire it was my intention to have it do, that is to say, have it so that it would ease or relieve itself whenever receiving severe side strain, and still immediately reseat itself."*

The patentee Grant, himself, in that deposition did not seem to be at all positive, in fact, directly otherwise, that his patent gave any intimation of this function or tipping capacity. Upon cross-examination as to this particular point, in the Goodyear case, Grant testified as follows:

> "X-Q. 28. But your patent does not say anything about the rubber moving sidewise in the channel, or tipping sidewise so as to partially leave the channel and then reseat itself, does it, as you stated the tire does?
>
> "A. I think not.
>
> "X-Q. 29. Do you know that your patent does not contain any such statement?
>
> "A. I do not know that it does. I have read it over several times and never saw any such statement."

The Testimony of Complainant's Expert, Livermore, Goodyear Case.

The complainant's expert Livermore testified in a dozen different places, in his deposition in the Goodyear case, that the Grant tire has the capacity to rise and fall and reseat itself under lateral strain. The exact language appearing in one or two of the statements when speaking of this alleged function of the Grant tire and patent to tip and rise and fall and reseat itself, is as follows:

> "That is, it consists in permitting the tire to rise slightly from the rim on one side, independent of the other, when subjected to very great strain, and immediately reseat itself when such strain is removed." (Goodyear Rec., p. 274.)

Again, this expert Livermore says:

> "The specific form of rubber affords a broad, firm support first at the bottom of the channel and sidewise with the flanges of the channel while permitting the rubber to rise in the channel at either side, when required." (Goodyear Rec., p. 275.)

Complainant's expert in the Goodyear case occupies over a printed page stating and giving his opinion as to the evident function of the Grant tire to rise and fall and reseat itself under severe use and lateral strain in travel. (Goodyear Rec., pp. 278-9.)

We do not understand that in the "Firestone case" the testimony of the complainant in that case, upon this point, as to facts stated or proven, was anything other or different from that which appeared in the Goodyear case. It is true that in the "Firestone case" there was set forth in the testimony of a witness by the name of "Krotz," in be-

half of the complainant, a so-called test to determine the existence of the tipping and reseating capacity of the Grant tire under supposed side thrusts or strains. This so-called test was represented by a curious proceeding, or performance, with a mechanical appliance connected with a certain kind of rubber tired wheel, in which, according to the admissions of the witness Krotz, "there was no effort made whatever to tip the rubber" and the vehicle was "driven carefully."

The fallacy of the test in the Firestone case is discussed by defendant's expert witness, Pond, *inextensio*, as appears in this Record, pp. 211-219, and ample reasons given why such tests were a farce to determine any right fact as to the tipping capacity and result of the Grant tire under severe lateral strain.

Truly, then, it would seem that the records in the Goodyear case and the Firestone case were in all respects substantially alike, and that the difference between the two cases was a difference, only, as to result; and opinions of the respective courts, given therefor.

The record in this, the Diamond case; the decision of the Circuit Court of Appeals of the Second Circuit in this case.

The decision of the Circuit Court of Appeals of the Second Circuit is printed in this record (pp. 681-4 inclusive). In that opinion the Circuit Court of Appeals of the Second Circuit in this case states, in substance, that the record in this case is substantially the same as the record in the Firestone case,

and refers to the Firestone case as a justification for its opinion in this case. The opinion of the courts in this case, as in the Firestone case and, indeed, as in the Goodyear case, hinges the validity of the Grant patent upon the fact as to whether or not the asserted capability of the rising and falling of the tire and the automatic readjustment of the tire upon its normal base condition is present and inherent in the tire construction, as disclosed by the specifications. In this case (Rec., p. 682) the Court of Appeals, speaking upon this controlling proposition, as present and proven in this case, states as follows:

> "The tests made in that case convinced us that this tendency actually existed and that we were safe in assuming as established, a proposition about which the experts on both sides agreed and the truth of which was demonstrated in open court.
>
> "The impossibility of proving or disproving in any satisfactory manner the existence of this tipping tendency by the observation of the vehicle in actual use or the examination of a worn out tire, will be admitted after a moment's reflection. The human eye cannot detect the movement of the tire when driven rapidly against a trolley rail or other obstruction at an angle of 45 degrees. So, too, a worn out tire with cuts and abrasions along its entire periphery may have the tipping capacity in question. The fact that tires have been produced in court which were rusted in the steel channel, is not important unless it be proved that they were subjected to severe lateral strain."

The writer of this brief desires to be as polite as possible, but also as positive and emphatic as possible in protesting against, repudiating, and combating and exposing the errors of the Court of Appeals

in this case, as to the statements upon this particular subject matter, disclosed in the opinion of these Courts of Appeal in this case and in the Firestone case. The opinions disclose three statements of fact, that can be briefly epitomized as follows, in the exact language of the opinions or slightly transposed:

I.

"The Grant tire has the capacity which no other possesses of readjusting itself and yielding to severe lateral strain without tearing or abrasion of the rubber, or injury to any of the parts."

II.

"The feature which secures patentability is inherent in the patent and the specifications, is so clear and specific that no intelligent mechanic can follow Grant's directions without securing the tipping action which inheres in no other tire."

III.

"The impossibility of proving or disproving in any satisfactory manner, the evidence of this tipping tendency by the observation of the vehicle in actual use, or the examination of a worn out tire, will be admitted after a moment's reflection."

How any court of mature judgment could have made these statements in the face of the record here present, is beyond the ken of the writer of this brief, and we shall now proceed to show to your Honors the absolute impossibility of the correctness of these statements, and the absolute error of every statement made, from the abundant and uncontradicted testimony of the record in this case. *This record is not the same record as in the Firestone case.* This record is absolute confirmation of the truth of every

statement and conclusion, and every line of the opinion, of the Circuit Court of Appeals of the Sixth Circuit, and we bespeak for the record depositions of petitioner in this case, a consideration and understanding, manifestly absent from the consideration of the Circuit Court of Appeals of the Second Circuit in this case.

The Record in This the Diamond Case.

We propose now to present to this court and discuss the record as now presented in this case. The petitioner, the Diamond Rubber Company of New York, had nothing to do in any way, either directly or indirectly, with either the records or the cases in the three separate litigations represented by the "Goodyear case," the "Kokomo case" and the "Firestone case," and I take it that the rights of this petitioner litigant will be determined by the record made in this case, and certainly that this petitioner is not bound, and should not be prejudiced by the record in the Firestone case. The Court of Appeals in the Firestone case, as we have seen and quoted, in speaking of the Grant tire, and relating to a question of fact, said:

> "The Grant tire has the capacity which no other possesses of readjusting itself and yielding to severe lateral strain without tearing or abrasion of the rubber or injury to any of its parts."

The record in this case, by voluminous testimony of witnesses familiar with the facts, is conclusive and uncontradicted that the Grant tire, clamped to the channel or rim, by the straining tension of the

two wires, has no such capacity, never did have, and never could have. It will be noticed that this Court of Appeals of the Second Circuit states that the so-called capacity of the Grant tire of readjusting itself and yielding to severe lateral strain is a capacity that is evidenced by and proven by the fact that a tire so constructed when subjected to severe lateral strain will do so *"without tearing or abrasion of the rubber or injury to any of the parts."*

It is entirely manifest that this question can be easily determined as a question of fact. If upon the examination of the tires of the Grant patent when used and after being subjected to "severe lateral strain" they were without any evidence of "tearing or abrasion of the rubber or injury to any of the parts," then the demonstration would be quite conclusive that, although Grant said nothing about these characteristics, or qualities, of his combination, and, indeed, as we shall show hereafter from the record in this case, not only said nothing about them, but knew nothing about them, and had no suspicion of their existence, then the statement of the court would be to a certain extent a correct statement as to the Grant tire, *although a statement that found no sanction or justification in the patent, and was equally present in several of the tire patents of the old art;* but the record in this case shows that the tire of the Grant patent, under "severe lateral strain," not only constantly produced abrasions of the rubber, but, as a matter of fact, finally injures and destroys the tire practically always before being worn out, and frequently before the utility and usefulness of the wearing surface

or tread of the tire has been affected to any extent, *one of the first original records showing that no such capacity existed, or was asserted to exist, in the Grant tire or patent is here present.* The testimony in this record showing these facts is as follows:

Upon pages 477 to 576 appears in printed form certain certified copies of original testimony taken in the case of this complainant, *The Rubber Tire Wheel Co.* v. *Firestone Victor Rubber Tire Co. et al.*, in the case then pending in the United States Circuit court for the Northern District of Illinois upon this Grant patent, in the year 1897 or the year following the grant of the patent. This patent was then but something more than two years old, and evidently at that time neither this complainant nor the patentee Grant, nor their counsel, had discovered this automatic capacity of the Grant tire to readjust itself by yielding when subjected to "severe lateral strain" and "without tearing or abrasion of the rubber or injury to any of the parts."

Defendant's counsel in that case, as shown by the record, certainly had no suspicion of any such capacity, and to show the questionable position of the then and now complainants-appellees as to there being any substantial virtue or value in the Grant patent over the other solid rubber tires then in the market and in use, took a considerable amount of testimony to show the precise character, as to wearing qualities, of this Grant tire as then sold in the market, and used in the two principal cities of the country, New York and Chicago. The testimony in

that case was given by the then leading carriage builders and liverymen in the cities of New York and Chicago, and the depositions of all of these witnesses was to the effect that the Grant tire of the patent in suit, as made by The Rubber Tire Wheel Company, a complainant in this case, not only tore in use, with destructive abrasions of the rubber, but the tire was so injured as to its parts by cutting out from the wires that it was destroyed in use before its capacity and usefulness as a tire otherwise had been affected.

Mr. JAMES W. PITNEY, ten years ago a leading carriage maker for thirty years in New York City, and a livery stable keeper for about twenty years (Rec., 482), testified, ten years ago, as to this Grant tire. Mr. Pitney testified that, as to these Grant tires made by the Rubber Tire Wheel Company, which he had put on himself, that he had never known one of them to wear out in use. (Rec., 483-4.)

> "Q. 10. What happens to all of the Rubber Tire Wheel Company's tires on vehicles owned by you or in your establishment before they wear out?
>
> "A. I should call it creeping, I suppose, shifting back and forwards, tying up into a knot like and cutting right through the wire, so that to get it smooth I would have to take out eight to ten inches. They cut off at the bottom and slip off the tire entirely."

Mr. Pitney testified that he could not remember of but one instance where the tires of the Rubber Tire Wheel Company had worn out in use in distinction from being destroyed by cutting. (Rec., 484; Qs. 12 and 13.)

Mr. SAMUEL LAWSON was a half owner of the Irvin stables in New York City. (Rec., 490; Qs. 1 to 5.) This witness, in 1898, had used the tire of the complainant in his business for about four years. (Rec., 491; Qs. 13 to 16.)

"Q. 17. What, if anything, happens to these tires in use?

"A. Well, I tell you what I find in them, they cut through; and the rubber becomes loose of course.

"Q. 18. Whereabouts on the tire do they cut through?

"A. Where the wire passes through to hold them on.

"Q. 19. Do they cut through at the sides or at the bottom of the tire?

"A. I have had the wire come through the sides; most frequently through the bottom."

Mr. Lawson testified also that he never knew of but one instance where a set, or even one tire, was worn out by use, before it was destroyed by cutting out through the wire. (Rec., 493; Qs. 22, 23 and 24.)

Mr. WILLIAM SEAICH, in the year 1898, or ten years ago, the leading liveryman in the City of New York, with his place of business at Nos. 40 and 50 East Thirty-second street, this city, for forty years (Rec., 497-8; Qs. 1 to 5), testified that he had then used for three or four years the solid rubber tires of the complainant on all of his different kinds of vehicles, about 125 in number. (Rec., 499; Qs. 10 to 12.) Mr. Seaich, when interrogated as to the wearing qualities of the Grant tires, testified as follows, and gave the reasons therefor (Rec., 500):

"A. Well, I have had a great deal of bother with them in splitting in two, had some worn

very well indeed, but the majority are constantly repaired or made new.

"Q. 15. What do you mean by these tires splitting in two; at what point and in what direction do they split, and what in your opinion is the cause of their splitting?

"A. I have always been under the impression that it was caused by the wire cutting from hole and the creeping of the tires.

"Q. 16. In what direction do the wires cut from the hole, downward toward the bottom of the channel, sidewise or upwards?

"A. Run sidewise right around.

"Q. 17. Do they cut out about on the level with the top of the flange of the channel?

"A. A little below the level.

"Q. 18. Mr. Seaich, have you ever had or known of an instance of any of these solid rubber tires like this exhibit wearing out or being worn out in use by the wearing away of the rubber on the tread or exposed surface of the tire before the tire was destroyed by the cutting out of the wires as you have described?

"A. Yes, sir, I have in two or three instances only. They wore to the top of the tire in two different instances; that is all I can recall to my mind.

"Q. 19. Do you personally look after such details of your business as is represented by your application and use of these rubber tires?

"A. My attention is called to each and every one of them."

Mr. Edward Francis Delaney. Ten years ago, or in the yeear 1898, this witness was one of the largest proprietors and operators of public hacks in the City of New York, and the sole proprietor. (Rec. 505; Qs. 1 to 6.)

This witness testified that for several years he had used the rubber tires of the complainant, the

Rubber Tire Wheel Company, and used no other kind. (Rec., 505-6; Q. 8.)

Mr. Delaney testified to the destruction of the Grant tire by cutting, abrasion and destroying the tire before being worn out, as follows:

"Q. 9. What, if anything, happens to these rubber tires in use so that you have to take them off or quit using them?

"A. The wire pulls through.

"Q. 10. Pulls through where?

"A. Through sideways and through the bottom.

"Q. 12. Are the tires any good after the wires are cut out or pull through the sides of the bottom?

"A. No, sir, they are no use at all.

"Q. 13. Have you ever had or known of a case or instance where the tire itself wore out before it was destroyed by being cut through at the sides or bottom?

"A. They never wear out altogether. It is impossible for them to wear out altogether.

"Q. 14. Do you mean that the tires are always destroyed by the wires cutting out the sides or bottom before they are worn out?

"A. They have always been destroyed with the exception of one or two cases."

Mr. Frank P. Stone of Chicago, in the year 1898 the second or third on the list of extended users of the Grant tire, in Chicago (Rec. 515; Q. 5), and who then did the largest business in the manufacture of high class carriages in Chicago (Rec., 519; X-Qs. 28 and 29), testified that he had kept watch and track of the rubber tires of the complainant to see in what manner they wore out or were destroyed in actual use, in Chicago (Rec., 515), and gave his reasons therefor, as follows (Rec., 516):

"Some of the wires holding the rubber onto the channel tire would cut their way down through to the channel—the bottom of the channel. Some would cut through the side. I think that is all."

* * * * * *

"The oscillation of the vehicle when in motion seemed to draw the rubber of the tire to either side of the channel, causing the tire to break or give away at the outer edge of the channel."

Mr. Stone was interrogated as to what proportion of complainant's tires were destroyed in use, by cutting at the upper edge of the channel. He could not state as to what proportion of such particular form of destruction took place, but said it was quite frequently, in comparison with the wearing down of the tires to the channel. (Rec., 516; Qs. 10 and 11.)

Mr. C. O. Harz, the largest owner and liveryman and operator of cab and boarding stables, ten years ago, in Chicago, at 505 Dearborn avenue, in that city (Rec., 528; Qs. 1, 2, 3), testified at that time that for three or four years he had used the solid rubber tire of the Rubber Tire Wheel Company, complainant, sold him by this complainant, and had some eighty cabs or vehicles equipped with complainant's tires. (Rec., 528; Qs. 4-7.)

This witness further testified that he did not think that any other liveryman or cab renting establishment in the city, in Chicago, had had a more extended experience than himself in the use of rubber tires, in Chicago, for four years prior to 1898. (Rec., 528-9; Qs. 9-10.)

Mr. Harz was then interrogated in detail as to the question of the destruction of complainant's tires before appreciable wear on their tread, and the reasons therefor, and he testified as follows:

"Q. 11. During the last four years have these complainant's tires worn out in the sense of being rendered useless by wear in distinction from being destroyed or made worthless in some other manner before being worn out?

"A. My argument to the people has always been that I am not wearing out your tires, but just throwing them away, for the reason that they didn't wear out on top, but continually wearing out underneath and on the sides, which, according to their promise or verbal agreement to me, should not be."

* * * * * *

"Q. 14. Have you ever in a single instance had one of the complainant's tires like this sample exhibit destroyed or made useless by the wearing out of the rubber in use, instead of the tire being destroyed by being cut out at the sides or through at the bottom?

"A. I have. One set that wore out from the top of the rubber wearing down to the level with the channel, until the wire was exposed.

"Q. 15. Is this the only instance you have ever known of complainant's tire wearing out instead of being destroyed by cutting or tearing, as you have described?

"A. The only one to my knowledge. The only one in my establishment."

* * * * * *

R-D. Q. 40 (Rec., 535):

"Is it not a fact that all of the liverymen and customers of the complainant in this city have just the same trouble and experience with the complainant's tires that you have set forth in detail in your deposition?

"A. Yes, from what I hear of these different liverymen."

Mr. WILLIAM S. ADAMS, having the largest livery plant or stable upon the South Side, in Chicago, and in business for eleven years (Rec., 535-6; Qs. 1-6), testified that he had about seventy vehicles, of other parties, and some twenty-six of his own, all equipped with solid rubber tires. (Rec., 536; Qs. 6-7.) At the time of the giving of the deposition of this witness, in 1898, he had used in the neighborhood of seventy-five or eighty sets of tires of the Rubber Tire Wheel Company, the complainant. When Mr. Adams was interrogated, in detail, as to the destruction of the tires, other than by wear, he stated as follows, in answer to Q. 11 (Rec., 537):

"A. There is the natural wear out of the tire and when I examine my tires—don't suppose there is a week but what I go through my vehicles and examine the wheels—I look along the flange of my tire—see that there is any tearing out, and of course if I see that the tire is a little torn I examine the tire close and if I find that it has had the wear and shows that it is worn out, why then I have to send it down and have a new tire put on.

"Q. 12. What do you mean by the tire being worn out that you so discover upon the examination?

"A. A tire may appear to have a rolling surface but still it may be torn out on the sides. You can see the wires through the sides of the tire along the flange and other times with this tearing out on the flange, it may be worn out on the under surface.

"Q. 13. Then as I understand you, when you examine your tires and find that they are cut along the flange and are cut next to the

channel and under surface, they are worn out as you understand and you substitute new tires therefor?

"A. Yes, sir."

Mr. Adams then gave instances as to the destruction of the complainant's tires by tearing and abrasion of the rubber and destruction by injury to the parts before any appreciable wear, as, for example, in answer to Q. 15, Rec., 538, he said:

"A. We had an experience with three landaus in three months' use the tires were sound at the sides and tore out on the bottoms."

* * * * * *

"When worn out I never saw but one set of tires that was worn out on the surface, during my experience. That was a brougham. That the bearing surface was worn right down and all the wear of that tire was shown on the surface and nowhere else."

In the case of Mr. Adams, as was frequently the case of many of the witnesses, the liverymen in those days frequently refused to pay the complainant, the Rubber Tire Wheel Company, for the tires purchased, by reason of a guarantee as to a length of time of their use, and by reason of the destruction of the tires, in the manner given, before being affected as to wear by use.

Mr. Charles F. Kimball, in the year 1898, had been in the carriage business at 315 Michigan avenue, Chicago, for twenty-two years, and was one of the largest retail dealers in the country. (Rec., 542; Qs. 1-4.) He had been familiar with the rubber tires for about eleven years, and at the date of giving his deposition had used many hundred sets

of the complainant, the Rubber Tire Wheel Company's, tires (Q. 6), and had used about double the number of any one else in the city (Q. 7).

When Mr. Kimball was interrogated, specifically, as to the manner of destruction of the tires of the Grant patent (Rec., 543; Q. 8), he said:

> "A. The English tire which we formerly used being vulcanized to quite an extent, wore down to the face of the flanges. On the present patterns of tires, the wires after a certain amount of service, either cut through the rubber sidewise or toward the steel channel before the face of the rubber is worn to the flanges, thus necessitating renewal of the rubbers.
>
> "Q. 9. Have you ever known of a single instance in the use of complainant's tire where the tire was not destroyed by cutting out at the sides or bottom before it was materially injured by wear on its tread or surface in use?
>
> "A. So far as my experience goes, all rubber tires held by wires require the renewal from cutting of the wires through the rubber, before the rubber wears down even with the face of the metal flanges.
>
> "Q. 10. Have you ever known an instance where complainant's tire has been worn out in use in distinction from being destroyed by cutting at the sides or bottom?
>
> "A. We put on hundreds of sets of tires that I do not see personally, but from those that have come under my personal observation, the wires have always cut through before the rubber wears down even with the metal flanges."

Mr. Wallace D. Moon testified that he was in the livery business in Chicago for twenty-five years, on Wabash avenue for eight years—runs about 100 to 125 cabs or vehicles with rubber tires, since 1896. (Rec., 556; Qs. 1-7.) When interrogated as to the

question of destruction of these tires, Mr. Moon testified as follows (Rec., 557-8):

"Q. 11. What, if anything, happens to these tires so that they have to be removed and replaced by other tires?

"A. They cut out either at the sides or at the bottom, one of the two. Sometimes at the side and sometimes at the bottom.

"Q. 12. Whereabouts do complainant's tires cut out at the sides?

"A. The top of the flange."

* * * * * *

"Q. 14. What was the condition of the old tires when replaced?

"A. *They were either torn out at the sides or at the bottom. They were not worn out nor half worn out.*"

Mr. Robert C. Irwin, superintendent in the repairing department of C. P. Kimball & Company for eight years. (Rec., 561; Qs. 1-5.) It will be remembered that Mr. Kimball testified as to his belief as to all of these rubber tires being destroyed by cutting out from the wires, in distinction from being worn out, but that he stated that many of the complainant's tires put on in his establishment he did not see either put on or taken off—for that reason this witness, Mr. Irwin, his superintendent, was called, whose duty it was to put on and take off all of the rubber tires.

Mr. Irwin testified, from his practical knowledge, as to the destruction of complainant's solid rubber tires before injured by use, as follows (Rec., 563):

"Q. 18. For what reason or reasons do you remove, or have you removed, the rubber tires of the complainant's and put on new tires

therefor? What happens to the tire that necessitates its removal?

"A. In most cases the tire is not worn to outside appearances. But is torn away inside of the channel.

"Q. 19. At what point or points is it torn away?

"A. I have seen it both torn at the sides and also the wire pulled through on the bottom."

Certified copies of all of these depositions appear in this case, as above indicated, the principal complaint being the same as in the case ten years ago, when these depositions were taken—the Grant patent being the same patent, and the tire being the same.

It is therefore uncontradicted in this record, and will be substantiated hereafter by the testimony taken in this case, that in the years 1897 and 1898, when this patent was little more than a year old, the tire, as constructed under and in accordance with such patent, in actual use, by the great carriage and livery houses of the two principal cities of the country, tore under lateral strain, the rubber was abraded and the tire was so injured by such strain that it was torn loose from its seat in the channel over the wire, both on the sides and on the bottom, and was so cut to pieces that the tire itself was ruined and worthless before the operating or wearing surface, or tread, of the tire was worn or injured in any detrimental manner by use.

Under the facts, then, as appeared in the record of such case ten years ago, and uncontradicted in this record, it is absolutely certain that the Grant

tire at that date had no capacity whatever, and did not in any way readjust itself and yield to severe lateral strain without tearing or abrading of the rubber or injury to any of the parts, but, upon the contrary, the tire of the Grant patent at that date, as a matter of fact, was destroyed as a tire, by the tearing and the abrading of the rubber, and the injury of its parts lying below the periphery of the flange in which it was seated, and had no capacity for readjusting itself to save itself from the fatality of tearing, abrading and injury of the parts.

The statement of the learned jurist, then, in the Firestone case and adopted as the opinion in this case, that "the Grant tire has capacity which no other possesses of readjusting itself and yielding to severe lateral strain without tearing or abrasion of the rubber, or injury to any of its parts," if any reliance can be placed upon human testimony and experience, as present in this record, simply cannot be correct.

The undisputed testimony in this record as to the yielding capacity of the Grant tire and its capacity to yield and relieve itself from lateral strain by the rising and falling of the wires without tear or abrasion of the rubber, or injury to any of the parts;—proves such asserted movement a myth and a fallacy.

The testimony in this case is clear and undisputed, and none otherwise, that the tire of the Grant patent today is destroyed by the tearing and abrasion of the rubber and the destruction of its parts,

brought about by severe lateral strain, and that the Grant tire is so destroyed, with few exceptions, before the tread or exposed portion or wearing surface of the tire is affected, or materially injured in any manner by actual use.

The testimony in this case, even at this date, ten years later, shows that a very substantial portion of the tires of the Grant patent in actual use, under severe lateral strain, tear out, and the rubber is abraded, and the tire injured, as to material parts below the rim or flange, before the wearing surface of the tire or tread is injured in any material degree.

Mr. Louis Keuhne, Chicago, a builder of carriages in Chicago for nineteen years (Rec., 273-4; Qs. 1-2), was called by defendant-appellant as a witness in this case, in January, this year, 1908, and testified that he employed on an average of fifteen or twenty men continuously, and had used the complainant's tire, the Rubber Tire Wheel Company, since 1894 or 1895. (Rec., 275; Qs. 6, 7, 8.) Mr. Keuhne, when interrogated as to the wearing of the Grant tire for the last ten years, said (Rec., 279; Q. 27):

> "A. In most cases the rubber was worn down to some extent, but in nearly every case they were cut through on the sides. That was the cause of our replacing them, because they were worn out and cut through on the sides.

Mr. Charles F. Hudson, a salesman, Chicago, and familiar with the solid rubber tire business, and these Grant tires since 1896 (Rec., 282-3; Qs. 2-3), and who had applied, and seen applied, thousands

of such tires (Q. 8), testified as follows as to this point (Rec., 284):

> "Q. 11. Have you ever seen or known of these solid rubber tires remaining in the channel without the rubber being cut out until the tire is worn practically down to the rim?
> "A. No, I never have."

Mr. Hudson testified that he had personally sold, in the United States, during the last ten years, hundreds of thousands of such tires. (Rec., 285; Q. 17.)

Mr. Fred C. Koenig, Wabash avenue, Chicago, salesman for a rubber tire company, and familiar with the Grant tire for several years (Rec., 291; Qs. 1, 2, 3), and who did nothing but apply these tires for two years (Rec., 293; Q. 5), when interrogated upon this point of the destruction of the tires by cutting and abrasion and destruction of the parts before the tread had been injured by wear, testified as follows (Rec., 293):

> "Q. 12. What proportion of these tires that you have put on and taken off as you have described, were worn out by the rubber being worn down to the channel and the tire base still in position without cutting out the bottom of the tire?
> "A. Very few, if any."

Mr. Charles H. Smith, Chicago, and the general manager of the Diamond Rubber Company of Akron, Ohio, for seven years at that place. (Rec., 305-6; Qs. 1-5.)

Mr. Smith was qualified to speak with great accuracy and authority upon this point, as to the de-

struction of the tires by cutting and abrading the rubber and destroying their parts before the usefulness of the tire had been seriously impaired upon its tread, by wear, and testified as follows (Rec., 315-6):

"Q. 27. In your experience and with your knowledge of these internal wire tires, state how and in what manner these tires are destroyed and rendered useless otherwise than by wear by use on the tread of the tire?

"A. By the action of the rubber on the stationary wires working from the inside towards the outside. That is to say, the constant straining and flowing of the rubber in actual use on the wheel of the vehicle pulling away from the wires and eventually enlarging and cutting and tearing out the rubber at the sides or bottom of the holes through which the wire is inserted, until it breaks through to the outside or base of the tire, as the case may be.

"Q. 28. What proportion, approximately, of these Grant tires, to your knowledge, wear out in actual use, by the rubber being worn down to the channel iron in distinction from being destroyed by the cutting out of the rubber on the sides or bottom of the contacting base?

"A. My personal observation has shown me that the percentage is very small. Would say somewhere between 5 and 10 per cent. Much depends as to the use to which the vehicle is put, and the conditions under which it is run or operated and used."

Mr. Leroy Eighme, one of the largest liverymen in Chicago, and an extensive user of the Grant tire, from the beginning (Rec., 345; Qs. 1-7), when interrogated as to the point of the destruction of the tires, by cutting of the rubber and abrasion and destruction of the parts before the tire had been se-

riously impaired on its tread or working surface by actual use, said (Rec., 346):

"Q. 15. But what is the matter with the tires that you take them off of your wheels?

"A. They are worn, the wires have cut through the rubber.

"Q. 16. Does the cutting of the wires through the rubber destroy the tires before they are worn out?

"A. Yes, sir.

"Q. 17. How many, or about how many, as to percentage of tires that you have taken off of your wheels are worn out down to the flange before they cut out?

"A. About one-third of them.

"Q. 18. Whereabouts on these tires does the wires cut out, on the side or on the bottom of the tires?

"A. On the bottom."

Mr. Harvey Edgerton, a prominent liveryman of Chicago, Illinois, for thirty-five years, and a user of the Rubber Tire Wheel Company's—the complainant—tire since the beginning of their sale (Rec., 351; Qs. 1-3), testified that in his experience about one-half of his tires were destroyed by ripping off from the wires, on the sides or the bottom. (Rec., 353; Qs. 17 and 18.)

Mr. Fred M. Meckel of Chicago, a wagon manufacturer for twenty-five years, employing some seventy-five men, and the user of solid rubber tires of the Grant patent for some ten years (Rec., 359; Qs. 1-6), when interrogated upon this precise point, said (Rec., 361):

"Q. 16. From your experience please state about what proportion of the tires that have been used by you during the last ten years have

worn down to the channel by use, and what proportion has cut through the wires and been destroyed before being worn out upon their tread or contact surface?

"A. Well, there are a few that have worn to the channel. The majority are worn, and as the rubber becomes lifeless they tear at the wires."

Mr. ALBERT BUBSER, foreman of the Owen H. Fay Livery Company in Chicago (Rec., 367-8; Qs. 1-3), testified as follows upon this point (Rec., 370; Qs. 11-12):

"A. Very seldom they are worn completely out. They are generally destroyed by the wires cutting through the rubber and allowing the tire to come off and leave the wires on the channel.

"Q. 12. Where do the tires cut through from the wires, either on the bottom or the sides of the tires?

"A. Right directly underneath the wires."

Mr. ROBERT H. WENZ, carriage manufacturer and in the rubber tire business for liverymen (Rec., 377; Qs. 1-3), testified that he had been familiar with the putting on and taking off of Grant tires for several years (Rec., 378; Qs. 6-7), and when interrogated upon this point, testified as follows:

"Q. 13. How are these tires broken?

"A. Some are channel cut, some are wire cut, some the rubber is broken, and some completely worn down.

"Q. 14. What part of these tires or portions of them is channel cut and wire cut?

"A. About three-quarters.

"Q. 15. What part of each tire is so cut; I mean top, bottom or side, of the tire?

"A. Sometimes on the bottom and sometimes on the side."

Mr. Frank C. Gorman, manager of one of the largest livery companies in Chicago for six years (Rec., 385; Qs. 1-3), and familiar with the Grant tires for some ten or twelve years (Q. 5), and who had put on and taken off thousands of them (Q. 8), testified that about one-half of these tires, so taken off by him, were destroyed by *cutting out at the bottom, before being worn out upon the tread.* (Rec., 387; Q. 12.)

Mr. Homer C. Knight, an extensive carriage repairer and dealer in rubber tires like the Grant tire for ten years past. (Rec., 398-9; Qs. 1-8.) Mr. Knight when interrogated in behalf of the defendant-appellant as to this precise point, said as follows (Rec., 401):

> "Q. 13. In what manner are these tires destroyed. I mean as to what happens to the tire to destroy it in the actual use of the wheel without wearing out?
>
> "A. It breaks out from where the wires are on each side."

Mr. Fred Krumbick, carriage painter and rubber tire setter, Chicago, and doing the work of some of the leading livery stables in equipping their vehicles with rubber tires, in that city. (Rec., 403; Qs. 1-2.) Had put on and taken off in the last six years a thousand solid rubber tires like the Grant patent. (Rec., 404; Qs. 8-9). Mr. Krumbick testified as to the point in question as follows (Rec., 405-6):

> "Q. 14. How many of these thousand tires, approximately, were worn out by the rubber being worn down to the channel before the tire was taken off?
>
> "A. None.

"Q. 15. What happened to the tire that it had to be taken off before its tread or bearing surface was worn out?

"A. They were either cut by the channel or the joints would work loose where they were connected together and in that way they would tear and we would have to take them off."

Mr. FRANK GLEMBLOW, one of the largest liverymen in Chicago, for some ten years. (Rec., 411; Qs. 1-3.) Mr. Glemblow testified as follows as to the destruction of the Grant tire, without wear (Rec., 412):

"Q. 11. How were the tires on your rigs destroyed before they were worn out on their tread or bearing surface?

"A. They were generally pieces cut out or busted in some place, fringed out."

Mr. JACOB E. HANSON, in the livery business twenty years in Chicago (Rec., 416), began using the Grant tires about the year 1895 (Q. 6); had used about 300 tires during that time, since the year 1895 (Q. 7). This witness testified as follows in answer to Q. 20; Rec., 419:

"A. If the tire is firm in the channel and remains so it will wear down to the channel.

"Q. 21. Well, out of every ten tires that were put on for you, how many of them wore down to the channel before cutting out at the sides or bottom?

"A. Well, the percentage is not very great."

Mr. EDGAR W. SAMUELS.—Mr. Samuels follows the business, and is the proprietor of the business, exclusively of setting tires for vehicles (Rec., 427; Qs. 1-2); in business for the last four years (Q. 6); has put on and taken off about 10,000 tires of the

Grant patent. (Rec., 428; Qs. 5, 6, 7.) Mr. Samuels testified that the tires were destroyed before wearing out by cutting through and chipping off. (Rec., 429; Q. 14.)

Mr. Ernest R. Wickstrom, a carriage maker and manufacturer of Chicago (Rec., 438; Qs. 1-2); had been putting on and taking off Grant tires for some three years, in that city. Testified that the tires taken off by him were mostly cut and torn and damaged, "more damaged than they are worn out." (Rec., 440; Q. 12.)

Mr. Charels H. Knight, president and general manager of the Chicago Rubber Tire Company, doing business on Wabash avenue (Rec., 445; Qs. 1-3); familiar with the Grant tires for over ten years. (Rec., 446; Q. 6.) This witness testified that his company during the last three or four years had put on or taken off some two or three thousand tires. (Q. 11.) He also testified that if the first grade of rubber was used, approximately 90 per cent. of the tires would wear down to the channel, but on cheaper grades of rubber the larger percentage of the tires would cut out at the side, or through the bottom, instead of wearing down to the channel, as in the case of the first grade of rubber. (Rec., 454; Q. 43.)

Mr. Albert Nolting, for many years the blacksmith for Frank Parmelee & Company, largest transportation company in the United States. (Rec., 462; Qs. 1, 2, 3, and Rec., 467; Q. 37.) Mr. Nolting personally had charge and conducted the taking off and putting on of the rubber tires of that company.

(Rec., 463; Q. 7.) Had taken off and put on such tires about four years (Q. 16); about three or four thousand tires. (Rec., 464; Q. 21.) Testifying as to this precise point, this witness said (Rec., 466):

"Q. 30. How were those tires that you have put on or that you have ever taken off, worn or destroyed; what was their condition when taken off?

"A. The wire was pulled through the bottom. Cut through the bottom of the tire.

"Q. 31. How many of the tires, as to proportion, that you have taken off these wheels, were completely worn out as to their tread or wearing surface without cutting through the wires? Give about the proportion?

"A. About seventy-five out of a hundred.

"Q. 32. Were cut out or were worn out, do you mean?

A. Worn out."

These witnesses comprise the largest, leading and most intelligent liverymen and carriage builders of the west, and their testimony upon this point is uncontradicted in this record, and, we respectfully submit, are a complete refutation of the statement or suggestion that the Grant tire has the capacity to "readjust itself and yield to severe lateral strain without tearing or abrasion of the rubber, or injury to any of the parts."

The whole body of the testimony of this case is uncontradicted and, except by the calling of one witness by complainant, not attempted to be contradicted as to the actual fact, viz., that the Grant tire, when wired on to the full tensile strength of the high carbon wire, by a machine, does not, and cannot, move from its contacting base, as clamped to the bottom

of the channel by these retaining wires—but is permanently clamped and affixed to said base in so doing.

In the opinion of the Court of Appeals of the Sixth Circuit, the court said, in speaking of the alleged tipping capacity of the Grant tire, and as to the presence of this capacity under violent lateral strain, as follows:

> "Its actual presence, from practical experience or observation is not shown."

This was said in the "Goodyear case". In this case a long line of witnesses have been examined, whose entire experience with this Grant tire has been practical, and whose observations of the workings and conditions of the tire have been constant, and each and every one of these witnesses have testified positively and unequivocally that when the Grant tire is wired and clamped in position by these two retaining wires, by the powerful machine so used in so doing, that the tire as to its base, and that portion of the tire forced into the channel and held upon the bottom of the channel by the clamping wires, never moves or is displaced from contact condition with the bottom of the channel by any lateral movement under any violent lateral strain met in any condition of travel.

I beg leave to call the attention of your Honors, antecedent to a detailed presentation of the evidence to establish this fact,—to certain conditions that make the testimony of the witnesses called, unusually persuasive and convincing, as to statements made.

These solid rubber tires are an expensive proposition, as to initial purchase and use. The manufac-

turers and dealers of these tires, like both parties litigant, have no interest in the prolongation of the life of the tire, except that their tire shall last as long, or a little longer, than their competitive manufacturer's tire, because the destruction of a solid rubber tire, before materially impaired by use as to its tread surface, is all in their favor, as it is manifest that a tire destroyed for any reason, means an additional tire sold to take its place, by a manufacturer. But the liverymen of the country, and the users of these solid rubber tires, who have to pay the large prices for these solid rubber tires, are intensely interested, and, in the case of some liverymen, vitally interested, in the lifetime of the tire. The public at this day and date demand that the liverymen equip their different vehicles with rubber tires, and the liverymen must meet this demand of their customers, or lose their customers, but the liveryman does not get a cent more fare from his customers by the use of the solid rubber tires. Therefore, as the price of these tires, and their use, may represent a substantial part of the earning capacity of his stable, each liveryman watches these tires and handles them with the utmost care and solicitude to assure the prolongation of the lifetime of the tires themselves, and, as appears by the testimony now following, all these liverymen in the larger cities in this day now apply, by mechanical devices, the solid rubber tires and remove them from their wheels when the necessity arises, and for this reason the testimony that now follows in this record was taken and secured from the leading liverymen, and carriage makers and users, in Chicago and New York, a class who constitute the principal market for rub-

ber tires in this country, and who know, from actual experience and observation, all about these Grant tires.

Mr. Thomas G. Broderick, an extensive carriage builder of Middletown, Connecticut, for about fifteen years (Rec., 231, Qs. 1-2-3); had applied the Grant tire for about ten years (Rec., 232, Q. 6); for eight years had applied his own tires (Q. 9). Mr. Broderick, when interrogated, specifically, as to whether or not the Grant tire, when fastened and locked upon the channel by the two retaining wires, stretched to their utmost tension, ever moved or lifted, from contact with the channel base by any kind of a strain that comes upon it in use, testified as follows (Rec., 234, Q. 18):

> "A. Not unless the wire breaks or something of that kind; never knew them to move unless the wire does break, provided both wires are drawn even; if they ain't drawn even it will draw the rubber to one side and allow it to roll out or break out."

Mr. Broderick further testified that he had never heard it stated, or claimed, that a Grant tire had the capacity of tipping or adjusting itself, or readjusting itself when such a tire was subjected to the severest lateral strain possible in use on the vehicle in travel. (Rec., 234, Q. 19.)

Mr. Francis A. Ludlam, carriage and wagon shop at Glen Cove, Long Island; had put on fifteen hundred sets of the Grant tires in about ten years (Rec., 248, Q. 9),—four tires to a set (Q. 10), this being six thousand tires. Drawing the wire just as tight as they could without breaking them (Q. 16); the same tension (Q. 18). Mr. Ludlam was then asked

the following question, and made the answer thereto, as follows (Rec., 249):

> "Q. 19. Mr. Ludlam, after these two wires have been tightened to their utmost tension and the rubber tire locked and fastened in the channel rim by this action, is it possible by any lateral side thrust of the vehicle upon which said tires are fastened and the wheels of such vehicle, or is it possible in any of the known movements to which a wheeled vehicle is subjected to in travel, no matter how severe, to raise or unseat this tire so fastened in the channel rim by lifting the wires in the slightest degree?
>
> "A. It can't be done, without the wire breaks."

Mr. OMAIRE J. DUHAMEL, carriage builder in Brooklyn for seventeen years, as large as any in Brooklyn. Equips his carriage with the Grant tires (Rec., 260), Qs. 1-4); been using Grant tires for ten years; puts on one hundred sets per year; four tires to set (Qs. 6-7), this would mean four thousand tires in the ten years.

Mr. Duhamel was then asked as follows (Rec., 262):

> "Q. 18. Mr. Duhamel, after these Grant solid rubber tires were fastened in position in the channel by stretching the two wires to their utmost tension by the machine and then brazing them, did those tires rise or fall in any way or to any extent, or could they rise and fall in the channel by any travel to which the vehicle was subjected, lateral thrust of the wheels or any of the severe movements to which the vehicle would be subjected in travel?
>
> "A. No, sir."

Mr. Duhamel testified that about three years ago he abandoned the Grant tires and used the two ex-

posed side wire tires in the channel, like one of the exhibits before the court. These wires are on the outside and can be easily seen, and their relation to the tire; the witness testifying that he had never seen these outside wires rise or fall, or move, up or down, or in any way, when the wheel was subjected to severe side strain, or the tires giving lateral movement in travel. (Rec., 263, Q. 25.)

Mr. Louis Keuhne, carriage builder of Chicago, nineteen years. (Rec., 273-4, Qs. 1-2-3.) Familiar with the Grant tire since 1895 (Rec., 274, Q. 5); had put on and taken off one thousand of these tires a year. (Rec., 278, Q. 22.) The witness was then asked to state the fact as to his knowledge, founded upon his ten years' use in the taking off and putting on of these Grant tires,—as to their being any tipping capacity in the tire to rise or fall under any condition of travel when the strain comes upon the tire, and the witness answered (Rec., 278, Q. 25) as follows:

> "A. It is my opinion that if the tire is applied properly and the wires have the proper tension there is no chance for the rubber to rise from the channel, the strain would be all above the wires,—or rather the give to the rubber would be all above the wires."

This witness had himself put on and taken off many of these tires, and had given his personal attention to the applying of them for ten years. (Rec., 280, Qs. 32-33.)

Mr. Charles F. Hudson, Chicago, familiar with the Grant tires by handling and selling them since 1896 (Rec., 282, Qs. 1-2-3); had seen thousands of them applied to various vehicles (Q. 8). The wit-

ness, when further interrogated as to whether he had ever known, or heard it claimed, that the Grant tire, when clamped in position on the rim by these two retaining wires, drawn to their utmost capacity, without breaking,—that such a tire so wired on could rise or fall in the channel when subjected to the most severe usage, replied (Rec., 285, Q. 16) as follows:

"A. I have never heard and I don't believe they can, when properly applied."

Mr. Fred C. Koenig, salesman for a rubber tire company in Chicago (Rec., 291, Qs. 1-2-3); familiar for several years with the Grant tire (Q. 4), and doing nothing but apply these tires to vehicles for two years (Q. 5); had put on and taken tires off of different kinds of wheels, as high as thirty tires per day. Mr. Koenig was then asked and answered as follows (Rec., 293):

"Q. 13. Among these hundreds and thousands of tires that you have put in position by using this machine which you have described and which you have taken off from wheels to be replaced, as to any one of these tires, have you ever heard or known of an instance where the two wires of the tire or either of them permitted the tire to tip up or the wires themselves tipped up to adjust themselves or to meet the side thrusts or strains that were put upon the tire in actual use in service, even of the severe style?

"A. Never, only in case of broken wires."

Mr. Koenig then testified that from his knowledge of these tires, and when they were wired on to the capacity of the wires, as follows, in answer to Q. 14, Rec., 294:

"A. No, sir. It is not possible for them to rise from their position after they have once been properly applied."

Mr. CHARLES H. SMITH, the manager of the Diamond Rubber Company, an Ohio corporation, at Chicago, Illinois (Rec., 305), and familiar with the Grant tires since the year 1901 (Q. 5); and directed and assisted in the work of putting on and taking off of tires (Q. 6), and has immediate knowledge of some twenty-five or thirty thousand sets put on by various manufacturers during that time. (Rec., 311, Q. 13.)

Mr. Smith testified that it was impossible for the tires, when wired to the channel as they should be, —to tip or rise or fall from their contact base in the channel by any lateral thrust movement put upon them on the exposed body of the rubber,—his exact answer being found on Rec. 312, as follows:

> "A. No, not if the tire is properly applied and the wires are tight enough. To overcome a possibility of this kind and to be sure that the wires remain tight and firm I always recommend the use of a high carbon wire, a wire that would not stretch."
>
> * * * * *
>
> "Q. 16. What is the object then of locking and clamping these internal wires and the tires so tight in the channel by straining the wires to the extent you have described?
>
> "A. To prevent the tires from slipping in the channel. The tire I always recommend must be applied so tight that it must be a part of the wheel itself.
>
> "Q. 17. Do you mean by that that the wires clamp the base of the tire so tightly to the rim that the wires and the base of the tire cannot move any more than the rim?
>
> "A. I do."

Mr. Smith then offered in evidence a wheel representing the ordinary manner of fastening and clamp-

ing the tire to the channel base, and it is here present and marked "Defendant's Exhibit Standard Rubber Tired Wheel." Mr. Smith then cut away two portions of this tire, and a portion of the rim in this exhibit,—the portion of the rim to illustrate how the wires could be slightly moved by a screw-driver or cold-chisel, and the leverage thereon, applied directly under the wires,—a leverage never possible in actual use,—and the cut away portion of the tire flush with the rim, exposing the two retaining wires, to show that no lateral thrust movement of the rubber, such as met in actual travel, could rise or lift or tilt the wires.

Mr. LEROY EIGHME, one of the leading liverymen in Chicago, conducting a large business for seventeen years (Rec., 345, Qs. 1-5), used the Grant tires since they came out (Qs. 6-7). As to the capacity of these tires to rise and fall in any strain of travel Mr. Eighme said (Rec., 348):

> "Q. 26. Mr. Eighme, upon those tires that were locked in position by the two wires on your various vehicles so that they couldn't creep, did you ever know or hear of those tires rising or falling by any strain that was put on the wheel and by the wires rising and falling in any kind of hard usage of your vehicles?
>
> "A. No, sir."

Mr. HARVEY EDGERTON, Chicago, liveryman for thirty-five years. (Rec., 351, Qs. 1-2-3.) Mr. Edgerton was then asked as to whether or not he had himself known, or had ever heard, that these Grant rubber tires had any capacity for rising and falling or tilting up and down in the channel by any strain of travel or use in Chicago, and he replied (Rec., 354, Q. 24):

"A. I never heard of it."

Mr. Edgerton abandoned the two internal side wire tires of the Grant patent some five or six years ago, and now uses the side wire tire like the "Defendant's Exhibit Firestone External Side Wire Tire." (Rec., 354, Qs. 26-7-8.)

Mr. FRED M. MECKEL, Chicago, extensive wagon manufacturer; used the tires of the Grant patent for the last ten years. (Rec., 359, Qs. 1-5.) Mr. Meckel also testified that when these Grant tires are properly wired to the channel he never himself knew, nor had ever heard it claimed that they moved or had any capacity of movement, as to rising or falling, or reseating themselves in the severe lateral strain or lift put upon them among the street car tracks of the City of Chicago. (Rec., 361-2, Q. 17.) Seventy-five per cent. of the solid rubber tires used by this witness were the side wire tires, instead of the two internal wire tires. (Qs. 19-20, and X-Q. 26.) Upon cross-examination Mr. Meckel said that they turned out about five hundred vehicles, of all kinds, a year. (Rec., 362, X-Q. 21.)

Mr. ALBERT BUBSER, foreman of one of the largest livery companies in Chicago, Owen H. Fay Livery Company, repair shop. (Rec., 367, Qs. 1-2.) As to any capacity of the Grant tire to rise and fall and tilt by said strain in travel, the witness testified as follows (Rec., 370):

> "Q. 14. Mr. Bubser, after you have placed these tires in the rim, and fastened them by stretching the two internal wires as tightly as you can without breaking them, do you yourself know, or have you ever heard of such tires and the two internal wires tilting or lifting in

any way from the channel bed in the travel and strain of the tire, no matter how great to which it is subjected, upon the wheels, on the car tracks in the streets of this city?

"A. Well, I will answer that, no."

Mr. Robert H. Wenz, business, carriage painter and the application and removal of rubber tires for the leading liverymen of Chicago. (Rec., 377.) Mr. Wenz testified as to the tires that had been clamped into position by the retaining wires stretched to their utmost tension without breaking, that he had put on various vehicles,—that such tires did not rise or fall from their base, or tilt on the worst conditions of travel over street car tracks, etc., without the wires broke. (Rec., 379, Q. 17.)

Mr. Frank C. Gorman, manager for Bane Brothers Livery Company, Chicago, one of the largest livery concerns in Chicago (Rec., 385, Qs. 1-2-3); familiar with the tire of the Grant patent for ten or twelve years (Rec., 386, Qs. 5-6); during the last eight or ten years he had personally attended to the removal from different wheels of thousands of these tires. (Rec., 388, Q. 18.) This witness testified that these tires, rightly wired and secured to the channel, it would be impossible for them to rise or fall or lift or reseat themselves by any strain that is put upon them, no matter how severe, in actual use and travel. (Rec., 388, Q. 18.)

Mr. Homer C. Knight, carriage painter, in Chicago, for nine years, who is familiar with the Grant tires, and had taken off and put on large numbers of them during that time, by machinery. (Rec., 398-9, Qs. 1-6.)

Mr. Knight testified that he never knew or heard of an instance where these rubber tires tilted or lifted or moved up and down, as to their channel base, unless one of the wires were broken. (Rec., 400, Q. 12.)

Mr. Fred Krumbick, a carriage painter and rubber tire setter, Chicago (Rec., 403, Qs. 1-2); with Moxley's livery stable about six years (Qs. 3-4); put the Grant tires on by machine for a number of years. (Qs. 8-9-10.)

Mr. Krumbick, when asked if, during the six years, he had ever known or heard of the solid rubber tires like the Grant patent, and that he had put on or taken off, after being wired on as tight as they could be without breaking the wires,—if he had ever heard or known that such tires had a capacity for rising and falling or tilting under any severe strain or travel on the car tracks of the city, replied (Rec., 405, Q. 13):

> "A. Well, I don't really know how to answer that. I would say no. I have had a few which came loose once in a while. That's about as near as I can answer it."

Mr. Frank Glemblow, an extensive liveryman in Chicago, familiar with the Grant tires since 1897. (Rec., 411, Qs. 1-5.)

Mr. Glemblow testified that on the rigs to which he had applied these tires, during the last ten years, he had never known or heard of the tires, when properly wired, rising or falling or tipping in any way, even under the most severe strains of travel among the car tracks, and did not think they could. (Rec., 411-12, Q. 9.)

Mr. JACOB E. HANSON, livery business in Chicago for twenty years (Rec., 416, Qs. 1-3); familiar with the Grant tire in use since 1895 (Q. 6); personally took off these Grant tires (Q. 10).

As to the alleged tipping capacity of the tires this witness said (Rec., 418):

> "Q. 17. Did you ever yourself know, or did you ever hear that the base of these solid rubber tires would lift from the channel, or the wires themselves would lift or tilt with any strain that was put upon the wheels of your rigs in the most severe and racking conditions of travel on the streets or car tracks of this city, to which they were subjected?
>
> "A. No. If they were properly applied they should not do that."

Mr. EDGAR W. SAMUELS, exclusive business, the setting of vehicle rubber tires, and proprietor of said business. (Rec., 427, Qs. 1-3.) Had taken off and put on, during the last four years ten thousand of such tires like the Grant tire in suit. (Rec., 428, Qs. 5-6-7.)

As to any tipping capacity of these tires when wired on by machine, as tightly as possible, without breaking, Mr. Samuels said (Rec., 428):

> "Q. 12. In putting on these 10,000 tires by these two internal wires by machine, as you have stated, to your knowledge, or have you ever heard of an instance, or have you ever heard anybody claim that the base of these tires below the two wires and contacting with the metallic channel or rim, or the two wires themselves, ever rose or fell, or the tire tilted in the channel, or the wires tilted or tipped under any strain or use that the wheel was put to, even of the severest character over and among the

street car tracks or on the worse streets in this city, in use?

"A. No."

Mr. Ernest R. Wickstrom, carriage maker and manufacturer, Chicago; had put on and taken off Grant tires for three years. (Rec., 438, Qs. 1-2-3.)

As to any tipping capacity of the Grant tire when clamped in position by the two retaining wires, the witness said (Rec., 439):

"Q. 10. Do you know whether or not you stretch the wires so tightly that they hold the base of the tire down into the channel rim so that it cannot move or be made to rise or fall or tip or tilt, no matter what strain is put upon the wheel and tire in the most severe usage in travel that you can put the tire to in this city?

"A. If the wire is put in right the rubber in a severe test will tear before it will get out of the channel or tilt."

Mr. Charles H. Knight, president and general manager Chicago Rubber Tire Company (Rec., 445, Qs. 1-4); been familiar with the Grant tires about ten years (Rec., 446, Q. 6); his company has put on and taken off some two or three thousand of these tires. (Rec., 446, Q. 11.)

Mr. Knight testified that in the ten years' application of these Grant tires he had never known an instance where these tires tilted or had any capacity to rise or fall, or lift or tilt in the channel from the base contact by any strain which the wheel was subjected to, even amongst the car tracks of Chicago, in actual travel, and that they could not so tilt or rise or fall, his actual answer being (Rec., 450, Q. 24):

"A. Not when properly applied, and the right carbon wire used."

A practical test in practical use absolutely confirming the fact of the non-tipping capacity of the clamping wires.

We desire at this point to call the attention of your Honors to a proven fact in this case that wholly contradicts a statement appearing in the opinion of the Court of Appeals in this case. (Rec., 682.) The court there says as follows:

> "The impossibility of proving or disproving in any satisfactory manner the existence of this tipping tendency by the observation of the vehicle in actual use *or the examination of a worn-out tire will be admitted after a moment's reflection.*"

It does not seem that this "moment's reflection" could have been given to this testimony of Mr. Charles H. Knight, that is uncontradicted and cannot be contradicted, and the truth of which is apparent and carries conviction with it, simply upon the reading of the deposition itself, and we here bring this deposition into this prominence as a complete meeting and refutation of this quoted statement from the opinion.

Mr. Knight was so confident of his knowledge and experience as to this matter, that to demonstrate and make certain his knowledge as to use of tires so applied, and his belief as to all tires so applied, that he made an actual demonstration of the truth of his position as to this matter,—that is, he applied a coating of cement to the base of the channel of a wheel and marked the position of the tire when applying it, or wiring it upon the wheel—that is, he cemented the tire to the channel, before wiring, in

the usual way, to the extreme tensile strength of the wires. He then drove, and had driven the vehicle upon which this wheel was run, around the streets of Chicago, and subjected it to all of the usual and unusual conditions of travel in the city among the car tracks and otherwise, and he personally attended to the cutting of the wires and removing the tire, and found it cemented then as initially placed, which, of course, proves that this tire at least had not risen or fallen or tilted or rocked by any of the strains of travel of a week's duration.

The narrative, as to detail, of Mr. Knight's demonstration is described in Rec., 450-4, and the wheel is in evidence as "Defendant's Exhibit Certain Demonstrated Wheel."

Mr. ALBERT NOLTING, the master blacksmith for Frank Parmelee & Company, the largest transportation concern in the United States (Rec., 462, Qs. 1-3); during the last four years has put on and taken off about three or four thousand of these tires. (Rec., 464.)

This witness testified that the tires that he put on, by stretching the wires to their utmost tension, without breaking, never rose or fell or tilted or tipped, in any way, by any strain that was put upon the exposed portion of the tire in travel. (Rec., 465-6, Q. 29.)

We respectfully submit that the uncontradicted testimony of these witnesses that, as a matter of fact, these Grant tires, when wired on and clamped in position, by the powerful machine so employed for that purpose, not only have no capacity to rise or fall by any kind of strain present in travel upon the

exposed portion of the rubber, but that, as a matter of fact, these men, watching these tires for the last decade, their construction and operation, and vitally interested in the lifetime of the tire, know whether these tires rise or fall or tilt or rock, and, knowing this fact, having all of them testified positively and unequivocally, that there is no such capacity in the tire, that such capacity is necessarily destroyed by the locking and clamping of both wires of the tire, to the channel, and does not and cannot exist,—such testimony is conclusive.

A fact present and a condition present in this record that demonstrates and makes it absolutely certain that there is no capacity for tipping or tilting or rising or falling, and no such result can either be present or obtained in a Grant tire, wired and clamped at its base to its channel, by stretching to their utmost tension, without breaking, the two retaining wires used for that purpose.

A long line of testimony has been taken in this case that bears directly upon this point, and that makes it absolutely certain that no such capacity exists in the Grant tire, when rightly applied.

The absolute confirmation of this fact is found in the testimony of the witnesses above quoted upon this particular point. The facts and conditions here testified to by these numerous witnesses, and uncontradicted, that makes the non-tilting action of this Grant tire certain, is that upon a large majority of wheels to which this Grant tire is applied, the fabric at the base of the tire immediately becomes cemented or fastened to the base of the contact channel rim,

by rusting or corrosion or cementing of the fabric and rubber to the channel base. It is well known, of course, that these wheels are driven, of necessity, through mud and water, and used in constant conditions that tend to rust and corrosion. Now nothing can be more certain than the fact that if these tire bases under the wires, or the wires themselves, had the capacity, and did rise and fall, or tilt and rock, in actual travel, there would be no rusting of the base of the tire to the channel rim, and no cementing or corrosion between the two parts, for any such movement in the tire, of necessity, would prevent such cementing, or would tear any tire loose from its base, if it became rusted thereon. These facts seem too plain for contradiction.

Now, turning to the long line of testimony represented by the witnesses we have before quoted and presented as to two other different points, we find that the testimony is positive and certain, and uncontradicted, that a vast majority of these Grant rubber tires, when taken off of the rim or wheel are found to be cemented or rusted through their fabric base to the channel rim, so as to require a very considerable force to strip them from the rim or wheel. The City of Chicago is peculiarly adapted to demonstrate this fact as to the cementing of the tire base to the channel rim, by the fabric and rubber contact, as the streets of the city are level, and in times of rain or mud, the rubber tires are constantly subjected to immersion and contact with mud and water. Indeed, some of the earlier witnesses found some of these Grant tires, purchased by them, cemented to the channel rims, and we will afterwards show that this was done by Grant himself.

Take the witness, Francis A. Ludlam, of Long Island, carriage and wagon builder and applier of rubber tires, for ten years (Rec., 247),—this witness, upon this point, testifying as follows (Rec., 251):

> "Q. 32. To what extent have you found those two wire solid rubber tires like the Grant patent before you, cemented to the channel rim?
>
> "A. I have found a few that way.
>
> "Q. 33. Have you ever followed this practice of cementing the solid rubber tires to the rim in addition to the retaining wires?
>
> "A. I did in the early years.
>
> "Q. 34. Did you ever find that these solid rubber tires cemented to the channel rim as shown in this Grant patent and held in position by the retaining wires, as you have described, to be lifted or broken loose from their channel bed in travel?
>
> "A. No."

All of the remaining witnesses that I shall now refer to are the same Chicago witnesses whom I have heretofore presented, and I will simply refer now to that particular point in their testimony relating to the cementing of the Grant tires to the channel rims by rusting and corrosion, and the incapacity to move from the channel base by this reason alone, and the absolute demonstration of this fact of their incapacity so to move.

Mr. Louis Keuhne, Chicago, carriage builder and applier of rubber tires (Rec., 274), testified as follows as to the cementing of the Grant tire to the rim (Rec., 278):

> "Q. 23. Have you ever noticed in the wheels upon which you have taken off these solid rubber tires that have been clamped in position by the two wires as you have described,—have you ever noticed whether these tires or the bottoms

of them have become fastened to or rusted onto the channel or rim of the tire?

"A. I have seen many of them.

"Q. 24. How much force would you have to use to strip or tear the base of the tire from the channel that had become thus fastened by rust?

"A. Giving it a good pull with the hand it would come off."

Mr. FRED C. KOENIG, practical tire man, Chicago, for many years (Rec., 291-2), testified as follows as to this certain effect in use by rust and moisture (Rec., 294):

"Q. 15. In taking off or replacing these old tires have you ever noticed the fact of the tires being stuck or cemented to the rims by rusting and being kept in one position?

"A. Yes, sir.

"Q. 16. About how much strength would you have to use in tearing these rusted two wire tires loose from the bottom or bed of the channel?

"A. Sometimes it would take a good jerk with the hands."

Mr. CHARLES H. SMITH, Chicago manager Diamond Rubber Company of Ohio, having placed and removed thousands of these tires, testified as follows upon this point (Rec., 316):

"Q. 29. In your extensive knowledge of the application and use of these two internal wire Grant tires have you become familiar with the fact as to whether or not it is a fact that these solid rubber tires become fastened by rust or by a species of cementing of the bottom of the tire to the base or bottom of the channel rim?

"A. I have seen any number of instances where the base of the tire has rusted and stuck fast to the base of the channel and always where the tires have been properly applied and kept tight during the period of their service."

Mr. LEROY EIGHME, one of the largest liverymen of Chicago, seventeen years (Rec., 345), testified as follows as to this fact, and as to his knowledge (Rec., 347):

"Q. 22. Mr. Eighme, in taking off these thousands of tires that you have from your wheels during the last seven or eight years, have you found any considerable portion of them rusted or naturally cemented to the rims at their base, so that the base of the tire and the iron of the channel rim at the bottom was rusted or fastened together?

"A. Yes, sir, a great many of them are rusted or cemented to the channel of the rim.

"Q. 23. How much force does it require, and in what way do you tear or separate these rusted tires from the rim?

"A. Sometimes when we pull them off they stick so hard to the channel that you pull the canvas off from the bottom.

"Q. 24. Do you do that with your hand, or your both hands?

"A. One hand sometimes, and sometimes two, when they stick fast."

Mr. HARVEY EDGERTON, one of the oldest and largest liverymen in Chicago, on the South Side (Rec., 351), testified as follows as to this sticking and cementing condition of the fabric or base of the tire to the channel rim. (Rec., 353-4):

"Q. 21. State what has been your experience in taking these tires from the wheels, as to the condition of the tire in being rusted or naturally cemented to the rim by rust or corrosion.

"A. The canvas usually sticks to the rim of the vehicle, the iron, the channel.

"Q. 22. How much force ordinarily would you have to exert to separate the base of the tire or canvas from the channel as rusted in?

"A. Ordinary strength.

"Q. 23. With your hands?

"A. Yes."

Mr. Fred M. Meckel, extensive wagon manufacturer and rubber tire applier, Chicago (Rec., 359), testified to this cementing condition, substantially upon all Grant tires removed, as follows (Rec., 360-1).

"Q. 13. What proportion of the solid rubber tires that you have become familiar with in your business for ten years past become rusted and adhered to the channel?

"A. Well, I should say a large majority of them.

"Q. 14. When you take these tires from their channel rims, when they are either worn out or destroyed, how much force is necessary, or approximately, to separate or tear these adhering tires upon their contact portions from the channel bottom?

"A. I don't know exactly how much force it requires, but it very often leaves the canvas, sometimes the lower body of the tire adhering to the channel.

"Q. 15. What I desired to ask was, whether the tires were torn from the channel by a machine, or by simply a hand pull?

"A. Well, my experience has been by the hand pull."

Mr. Albert Bubser, foreman for one of the largest livery companies in Chicago (Rec., 367), testified to the usual cemented condition of the tires to the bases, when removed, but also to the fact that this condition usually existed where slippery paste had been used. (Rec., 372):

"Q. 26. What I desired more particularly to know, was whether or not the base or canvas portion of the tire was rusted or naturally cemented by moisture and corrosion to the bottom of the channel, so that it would require some force at least with the hands to separate the tire base from the bottom of the channel?

"A. That is frequently the case when we use slippery paste."

Mr. ROBERT H. WENZ, carriage repairer and applier of rubber tires, for liverymen (Rec., 377), having applied about four or five hundred tires, testified that he had found about 10 per cent. rusted to the channel, and occasionally had to use a chisel to remove the old rubber. (Rec., p. 380, Q. 19.)

Mr. FRANK C. GORMAN, manager of one of the leading livery companies in Chicago (Rec., 385), testified as follows as to his personal knowledge upon this point (Rec., 387):

"Q. 13. In taking off these hundreds or thousands of tires for the last nine or ten years, what has been the usual conditions that you found as to these tires as to the base of the tire or canvas portion being rusted to or naturally cemented to the bottom of the channel rim by corrosion or rust?

"A. Well, nearly all the tires that I have had taken off were rusted to the channel, and sometimes it was hard work to get them off; on account of the accumulation of rust they were cemented to the channel.

"Q. 14. Usually what force would you have to use on them to separate or tear the tire away from the channel?

"A. We would have to pull on them considerable."

This witness testified that he had found this cemented condition so complete and powerful, in several instances, that the rubber tire was held in the channel rim by the rust cement after the wires were cut. (Rec., 388, Q. 16.)

Mr. HOMER C. KNIGHT, carriage repairer and applier of rubber tires, Chicago (Rec., 398), testified as follows as to this cemented condition (Rec., 401):

"Q. 15. In these rubber tires that you have removed from wheels during the last eight or nine years, in what condition do you find the base of the tire and the fabric in relation to the channel rim?

"A. In the majority of cases I found the fabric rusted to the channel."

Mr. Fred Krumbick, rubber tire setter (Rec., 403) for the large livery companies in Chicago (Rec., 404, Qs. 7-8-9-10), had put on and taken off a thousand tires (Q. 8). This witness, when interrogated as to this cemented condition, stated as follows (Rec., 406):

"Q. 16. In these thousand tires, or as many of them as were taken off by you during the six years you were with Moxley, what was the condition of those tires as to the base or canvas portion of the rim being stuck to or cement rusted to the channel rim when you took them off?

"A. Well, I don't exactly understand your question. Do you mean the way they are stuck in the channel? We used to cut them and most of the time we had to pull them out of the channel.

"Q. 17. Do you mean that you cut the wire when you took the tire off?

"A. Most of the time we cut the wires unless they were tore off before they came into the factory.

"Q. 18. After you cut the wires how much force would you have to use to pull the bottom of the tire free from the channel? I mean did you use your hands in so doing, or a machine?

"A. Oh, we used our hands.

"Q. 19. State whether or not in tearing the base of these tires from the channel any of the canvas stuck to the bottom of the channel?

"A. No, sir."

Mr. Frank Glemblow, liveryman, Chicago, for many years, testified as follows as to the cementing of the tires to the rims (Rec., 412-3):

"Q. 12. Mr. Glemblow, when you come to cut the wires to take off these old solid tires, would the wires on tires spring away from the wheel or would you have to use some force with your hands to separate the base of the tire from the rim channel?

"A. It depends on it. Sometimes the tire is worked loose in the channel, then it would fall off, but whenever we had to cut the wires and the tires was tight enough then we had to pull them off or generally they were rusted together with the base of the channel."

Mr. Jacob E. Hanson, one of the largest liverymen upon the South Side, Chicago, testified as follows upon this question of the cementing of the tires to the rims by corrosion or rust (Rec., 420):

"Q. 24. How do you mean would hold on? What would it hold on when the wires, both wires, were cut?

"A. The corrosion from the water which had accumulated there.

"Q. 25. How much force would you have to use to pull these tires off after the wires were cut?

"A. Doesn't require great force to pull them out, but they would stay there, though.

"Q. 26. Could you pull them off or tear them off of the rims with one hand?

"A. Yes.

"Q. 27. About what proportion of the tires would come off or away from the wheel when the wires were cut, and what proportion of the tires would stick to the rim by corrosion and had to be pulled off by hand? I don't ask for the exact figures; give your best estimate?

"A. Well, the percentage is very small. I wouldn't attempt to give a correct answer to that because I don't know.

"Q. 28. The percentage is very small, do you mean, of tires that will fall off when the wires are cut and don't have to be pulled off by the hand?

"A. Yes."

Mr. Edgar W. Samuels, Chicago, whose sole business is the application and removal of solid rubber tires. (Rec., 427.) Mr. Samuels, during the last four years, has taken off and put on about 10,000 of such tires, by machine application, stretching the wires as tight as possible without breaking. (Rec., 428, Qs. 4-10.)

Mr. Samuels testified as to this cementing condition of the tires to the channel base, when removed, as follows (Rec., 429-30):

"Q. 15. How do you mean were these old tires stuck to the channel; what stuck the tires to the channel after the two wires had been cut and the tire itself separated?

"A. The rust.

"Q. 16. What force would be necessary to be used to separate or tear these rusted-in tires at their base from the channel; I mean, would you have to do it by a machine, or pull the tires apart from the channel by the hand?

"A. By hand.

"Q. 17. Have you ever noticed whether or not in tearing the base of these rusted-in tires from the channel that any portion of the canvas or the rubber base would stick to the channel in pulling them off; state the fact?

"A. Yes, sir, I would."

Mr. Ernest R. Wickstrom, carriage maker and applier of rubber tires, Chicago, testified that most of the time the tires were loose, and would fall off, but sometimes they stuck to the channels and had to be pulled off or apart, on account of rust accumulation. (Rec., 440-1, Qs. 15 and 16.)

Mr. CHARLES H. KNIGHT, whose only business is the application of rubber tires, Chicago, and this is the business of his company, the Chicago Rubber Tire Company. (Rec., 445.) He has applied some two or three thousand tires (Rec., 446, Q. 11); testified as follows as to this cementing condition, or process, of these three or four thousand tires removed and put on by his company (Rec., 454):

> "Q. 45. Do you mean that in 90% of these old tires so removed there is an adhesion more or less by rust or corrosion between the canvas and rubber base of the tire to the rim channel?
> "A. That is precisely what I mean."

Mr. ALBERT NOLTING, the master blacksmith of the largest transfer company in the United States, Frank Parmelee & Company (Rec., 462), testified as follows as to his actual knowledge as to the cementing condition between the base of the tires and the channel rims, at the time of the removal of the tires (Rec., 466):

> "Q. 33. Of these three or four thousand old tires that you have taken off of different wheels in the last four years what proportion of those tires, if any, were rusted or more or less corroded or stuck as to their canvas and rubber base to the wheel rim?
> "A. I would judge about seventy-five out of a hundred were stuck.
> "Q. 34. About what force would be required to tear these tires loose or separate them from the rim base?
> "A. Some of them I could pull out by hand; some of them I had to pound out with a hammer."

Defendant's (petitioner appellant) expert testified as to the alleged tipping capacity and tipping action of the Grant tire under severe lateral strain,—finding no such capacity.

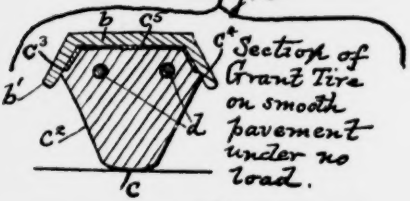
Mr. Samuel N. Pond gave an extended deposition bearing directly upon this alleged tipping capacity, or action of the Grant tire, under severe lateral strain, in their use upon vehicles, and his testimony is, unequivocally and emphatically, that no such tipping capacity existed in the Grant tire when wired on properly by the straining tension of the two retaining wires, by any force that could be brought upon such tire in actual travel. Mr. Pond being asked this question, and his attention being called also to the diametrically opposing positions of the judges of the Court of Appeals and of the Sixth Circuit upon this point, he testified in full as to this matter, and gave his reasons, both from personal observation, tests and experiments, and fully in connection with his opinions expressed. It will be without profit to quote in this brief Mr. Pond's extended deposition and reasons as to this alleged capacity for tipping of the Grant tire, either in actual use, or any suggestion thereof in the patent. His opinions, arguments and conclusions as to this matter are found in this record on pages 135 to 149, inclusive, and Mr. Pond then introduced in evidence a drawing illustrative of the only action of the Grant tire in use under varying loads, and which clearly, and more than usual in such cases, speak for themselves, as to each drawing, or figure. These drawings repre-

sent Mr. Pond's entire deposition and statements as to the alleged tipping capacity of the Grant tire, illustrating in the first six figures the only action of the tire possible in practical use, by lateral force or lateral strain, and illustrating in Figure 7 the theory of complainant's expert, and the position of complainant as to the tipping action and position of the Grant tire from several tire tests. We request the careful study and inspection of these drawings by the court, in connection with a study of the statements of Mr. Pond in connection therewith. This drawing is marked "Pond's Drawing No. 2," and appears in the record upon page 144, but is here reproduced for more convenient reference of the court. Mr. Pond says as to this drawing in his deposition (Rec., 145).

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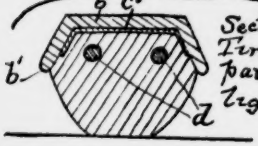
Defendant's Exhibit Pond Drawing No. 2.

Fig. 1



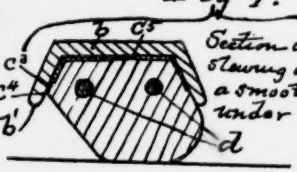
Section of Grant Tire on smooth pavement under no load.

Fig. 2.



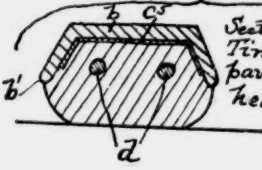
Section of Grant Tire on smooth pavement under light load

Fig. 4.



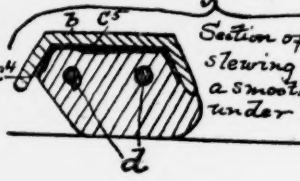
Section of Grant Tire slewing or skidding on a smooth pavement under light load.

Fig. 3.



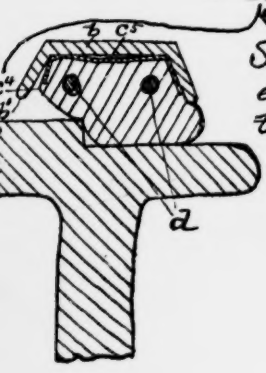
Section of Grant Tire on smooth pavement under heavy load.

Fig. 5.



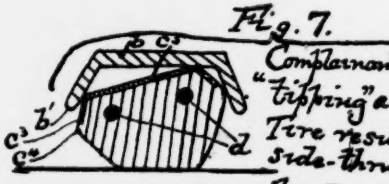
Section of Grant Tire slewing or skidding on a smooth pavement under heavy load.

Fig. 6



Section of Grant Tire encountering side-thrust of a rail of a street-car track under load.

Fig. 7.



Complainants' alleged "tipping" action of Grant Tire resulting from side-thrust under load.

> "These figures are free-hand sketches, and no claim of mathematical and geometrical exactness and precision is made for them; but they have been drawn in strict fidelity to all of the detail features of the Grant tire as disclosed in the patent in suit, and will serve to aid the eye of the court in following my description of the real action and behavior of the tire of the patent in suit under various conditions and circumstances."

This court says in its opinion, as above quoted, "that the Grant tire has the capacity which no other possesses of readjusting itself, and yielding to severe lateral strain, without tearing or abrasion of the rubber or injury of the parts," etc.

It would seem to be manifest that this statement is too broad as identifying the actual facts as a mechanical proposition. It is perfectly evident that if this Grant tire has the capacity to rise and fall and readjust itself in actual use, under force laterally applied, several of the other devices exhibited in the old tire art show tires that of necessity must have this capacity for tipping.

Mr. Pond discusses this question from a mechanical standpoint, and can see no reason from a mechanical standpoint why if this action is present or permissible in the Grant tire, it is not also of necessity present in several of the tires of the old art. Mr. Pond's discussion of this question, in detail, is found on Rec., pp. 157 to 162, giving the names and identifying several patents, United States and foreign, that have this rising and falling and tipping capacity of the tire in action—if the Grant tire has it. Mr. Pond has had nine years' experience in the United States Patent Office, and has additional rea-

son for knowing whether a patent, as to a disputed question of operation, possesses that mode of operation or whether that mode of operation so plainly inheres in the structure disclosed that there is no need to mention the operation or quality in the patent itself. Mr. Pond testified upon this point in question as follows (Rec., 162-3):

> "Q. 10. Do you find in this Grant patent any thought, idea or suggestion in any way, either in drawings, specifications or claims, that would lead you to suppose that following the Grant patent there resided in that patent any tipping capacity of the tire, or that said patent had in any way disclosed a capacity of the Grant tire to tip or readjust itself after yielding to severe lateral strain?
>
> "A. I do not find in this Grant patent any such thought, idea or suggestion, or anything that would lead me to suppose from a reading and study thereof that the construction disclosed and covered by the patent possessed any such capacity either as to the tipping or the subsequent reseating or readjustment. The court says, in the opinion from which I have just quoted, that:
>
> "'It now appears that the feature which secures patentability is inherent in the patent. * * * This feature was neither an accident nor an "obscure property"; it exists in every wheel on which is mounted a tire which follows the teachings of the patent.'
>
> "I know from my nine years' experience as a Patent Office Examiner that it is not the practice of the Patent Office to issue patents wherein 'the feature which secures patentability' is not clearly and distinctly set forth. In fact the feature or features which secure patentability are those which are required to be shown and described with the greatest clearness and fullness for the benefit of the public, that they may know

how to practice the invention when the patent shall have expired. No Examiner of the Patent Office, who is faithful to his sworn duty, allows a patent to issue under his favorable judgment thereon with the feature which secures patentability, whether it be a mechanical element or a novel quality or capacity flowing from a new arrangement or harnessing of old mechanical elements not fully described in plain terms in the specification of the patent. The feature which secures patentability in any properly issued patent is the feature of all features required to be made known with the greatest completeness and certainty. Hence I am confident that the Examiner who passed upon and allowed the application for the Grant patent in suit had no knowledge or even suspicion of the existence of this alleged quality or capacity of the Grant tire to tip and yield under side thrust in a manner to save the tire from injury and automatically readjust and reseat itself, or he would have required a full and clear description of this feature or capacity to have been inserted in the specification before the application would ever have been passed to issue by him. So far as the 'teachings of the patent' are concerned, they teach a lot of old things equally well taught in the art antedating the patent in suit, such as the shape of the channel rim, the cross-sectional contour of the tire, the retaining wires and their location in the tire and rim, and the canvas reinforcing strip—but not one word of teaching do I find in the patent in suit about this alleged novel quality or capacity of the Grant tire which is supposed to elevate it to the dignity of an invention."

The practical testimony as to this question of the alleged tipping of the Grant tire under severe lateral strain is as fully presented in this record as possible under the order of court limiting the time for taking of defendant's testimony. The court, under

specific order, limited the time of defendant to complete their testimony to forty days. Complainant's counsel refused to consent to the giving of defendant any further time for taking their testimony, although in the forty days given there came out of it the Sundays and various holidays, and the Christmas vacation,—and this further in face of the fact that the complainant in this case went on and took testimony in so-called rebuttal, and moved at the closing to set the case peremptorily upon the calendar, and this in face of the further fact that the case had been noticed by complainant to be set down for hearing immediately upon the closing of the testimony for the defendant, and the same had been so set down. We presume that this comment or complaint is surplusage, for the reason that the complainant did not take but one deposition to attempt to rebut it, hereafter discussed.

There is not a particle of doubt that all of the regular users of rubber tires in the United States would have given precisely the same testimony as here set forth, both as to the fact that there is no tipping capacity in the Grant tire, when wired and clamped in properly, by the utmost tension of the wires by a mechanical appliance capable of exerting this force, or the fact that with but few exceptions all of the solid rubber tires of the Grant patent in suit are cemented or glued as to their base of canvas portions which come in contact with the channel rim, to the channel or rim by corrosion and rust.

Mr. Charles H. Knight, a salesman familiar with the application of rubber tires in twenty-seven states, testified as follows as to this point (Rec., 459, R-D. Q. 79):

"R-D. Q. 79. With your familiarity of the putting on and taking off of these solid rubber internal two-wire tires, and with this trade in the twenty-seven states, as you have testified, have you any doubt, Mr. Knight, that every liveryman in every principal city of these twenty-seven states, and every party engaged to any extent in the putting on or taking off of tires in those states, would testify exactly as you have relating to the application and use and conditions of removal as to such tires?

"A. I don't know that the liverymen or the private users of solid rubber tires would be in a position to give an intelligent opinion regarding the *application* of solid rubber tires, but I do believe that the large users of rubber tires, meaning the carriage trade throughout the country, would substantiate and bear me out in my statements."

Complainants' counsel in the argument of the case below seemed to think that Mr. Knight had thrown discredit, not only upon his own deposition as to this matter, but as to the deposition of the liverymen or private users of solid rubber tires. It is entirely plain what Mr. Knight actually meant,—that is, that in the countless numbers of small towns in the United States where the liverymen or private users do not put on or take off their own tires, but send them to the blacksmith shop, that such liverymen and private users of the Grant rubber tires would not be in a position to give an intelligent opinion *regarding the application of solid rubber tires,* but an intelligent opinion could be given only by those liverymen and private users who actually themselves applied the tires and removed them.

We shall now assume, with great confidence, that this court will consider established as a fact by this

testimony that the Grant tire, when wired and clamped into position by straining the wires to their utmost capacity by the powerful machine employed in so doing,—fixes and clamps the base of the tire to the tire channel so that there is no possible capacity for the tire rising or falling or yielding or leaving its base, or tipping in any way in the channel, by any lateral thrust put upon the exposed portions of the tire in travel, no matter how severe.

The single, lone, solitary witness called by complainant to negate the facts as testified to by all of the witnesses above and foregoing, and who testified from his own knowledge and observation that the tires would tip sidewise, when wired to the full capacity of the retaining wires.

Phillip Erenwein, a witness called by the complainant, testified that he was a blacksmith in the employment of the complainant (Rec., 49), and had been engaged in applying rubber tires for the complainant five or six years (Rec., 49), Qs. 4, 5, 6 and 7); taken them off and put them on up into the thousands. This witness testified that he had seen these tires tip sidewise in the channel; had seen them do the same thing going around curves "so that you could see under the corner of the base of the tire above the flange of the channel," and that this tipping would raise the wires with the tire. (Rec., 50, Qs. 12-13.) This witness was ordered by the court to be produced for cross-examination. Upon cross-examination he said that he had only seen the tire tip sidewise in one instance (Rec., 72, X-Q. 81), but

he could have seen it under the same circumstances in a thousand instances (X-Q. 82); that the one instance where he saw it was upon the corner of Eighth avenue and 58th street, when the vehicle was going around the curve and the streets were wet, and the vehicle slewed, "which caused the tire to skid." (Rec., 72.) And he testified that this was a very common occurrence and happens millions of times in the city. (X-Qs. 83, 84, 85.) This witness also testified further as follows (Rec., 74):

> "X-Q. 111. And you never did see any rubber tire lift up and reseat itself in going out of a car track?
>
> "A. No, I did not."

This witness finally remembered another instance where he had seen the tire lift up from its base with the wires. That was at 47th street in front of Brewster's carriage factory (Rec., 74, X-Qs. 115, 116); the wheel ran up against the curb. (X-Q. 118.) In this instance he saw the rubber tire move up from the base—standing right in front of it. (Rec., 74, X-Qs. 123-4.) The witness then testified that he saw this tire move from the base in front of Brewster's this year, 1908; that in the other instance, on 58th street, it was about seven years ago. (Rec., 75, X-Q. 127.) The witness was also asked the following cross-question and gave the following answer as to the early practice of completing the tire before jumping it into the rim. (Rec., 75):

> "X-Q. 131. But in the early beginning of putting tires on these Grant tires it was the universal custom to fasten the ends of the wires and complete the tire before jumping them over the rim, was it not?
>
> "A. Yes, sir; to my knowledge that was the first way of applying them at the start."

The witness then said that he did not know but that in these two instances when he saw the tire rise and fall that the wires might not have been drawn tightly as they did even when they first jumped them on. (X-Q. 132.)

We respectfully submit that the deposition of this witness simply proves two things: First, that if the Grant tires have the capacity of lifting and tilting and rising and falling under lateral strain, this capacity and operation can be observed by anybody in the actual travel of the tire under these conditions; and, second, that as to the two instances that he did see this rising and falling action in solid rubber tires on vehicles in New York he does not know but that the tires were wired on loosely and not so tightly as to prevent this action.

Incidentally, the uncontradicted testimony of this witness also negates the statement in the opinion of the learned jurist who wrote the opinion of the Court of Appeals in this case, to the effect, namely:

> "That the human eye cannot detect the movement of the tire when driven rapidly against a trolley rail or other obstruction, at an angle of 45 degrees."

Whatever way his deposition may be read it can in no way militate against the depositions and the reasons given as to the rigidity and immovability of the tires of the Grant patent when clamped into position by the two retaining wires drawn to the extent of their straining and clamping capacity.

Antecedent facts and conditions appearing in this Record that prove conclusively—that this discovery that the Grant tire of the Grant patent has the capacity of yielding under severe lateral strain and does tip thereby and reseat itself; is a discovery not only not anywhere found in the Grant patent, but not known or suspicioned by Grant until several years after the date of his patent; and, that its discovery is due to the "keen optimism of professional experts."

First. There is in this record, and forming a part of this record, a number of depositions taken some ten years ago in the case of one of these complainants, *The Rubber Tire Wheel Company* v. *Firestone Victor Rubber Tire Company et al.,* in the United States Circuit Court for the Northern District of Illinois, and those depositions are marked "Defendant's Exhibit Original Testimony Illinois Case Nos. 1 and 2." The patent in that case and this case was issued in the year 1896 and the last above referred to suit was begun in the year 1897. The depositions of the various witnesses taken in that case, and now appearing under certified copies in this case, all relate to the Grant tire and the Grant patent, and, of necessity, if it had been known or considered at that time that this Grant patent and tire disclosed or made any reference to the function or operation which is now considered by this court to be the main object of the patent, namely, the capacity of rising and falling and lifting and tilting under lateral strain in travel, this fact would have been, somewhere or other along the line, disclosed or suggested

in the taking of testimony in that case. But your Honors can read these depositions from start to finish, and you will find nowhere in any of them any statement or suggestion even, that the Grant patent disclosed this capacity of tipping under lateral strain of the Grant tire, or any statement or suggestion that in actual use the tire had any such function, purpose or capacity. It does seem a little strange, then, that if this now asserted tipping capacity, and now affirmed by complainants to be the chief capacity of value of the tire, was supposed to exist at that time, some one of these numerous witnesses, or complainant's then counsel, did not say so. Lord Macauley, in one of his essays, in speaking of a noted character of his day, well known as a gifted liar and prevaricator, said that "the wonder was not that this celebrity through a long life was a notorious and persistent liar, but the wonder was that he never during that long life had ever been known to even accidentally speak the truth;" and the curiosity I think that will strike your Honors in reading these depositions in these old first cases is, not that nowhere in these depositions by any witness, or counsel, was it ever intimated or suggested that this tipping capacity was inherent in the Grant patent and always present and apparent in the Grant tire, but the wonder is that during the whole of that record no witness ever even accidentally referred to this supposed fact. We take it that the silence of the complainant and patentee in this case, at that time when they ought to have spoken as to this matter, is proof of the highest order that such silence was due to the fact that they had no conception, much less knowledge, of any advantageous tipping capacity in the Grant tire, or suggestion of same in the Grant patent.

SECOND. "Mine enemy hath written a book!" There appears in this record as a part thereof certified copies of two depositions given by the patentee Grant in the case of this complainant, *The Rubber Tire Wheel Company* v. *Columbia Pneumatic Wagon Wheel Co.*, pending in this circuit in the year 1897. Grant's first deposition was given in April, 1897, and is printed in full in this record on pages 577 to 617, inclusive. Also, a second deposition of the patentee Grant was taken in that case in August, 1898, printed in this record between pages 620 to 666, inclusive. Grant at that time evidently had no knowledge of any tipping capacity in the tire construction under his patent, or any suggestion of any such capacity that could be read into, or out of, his patent, and the patentee Grant evidently at that time thought and knew that where any such capacity could possibly be present by jumping the completed tire into the channel, and so loosely that it would tilt or lift, that any such capacity was a marked detriment to the tire itself. In this deposition Grant was given opportunity, over and over again, to state his knowledge or belief as to any such capacity in his tire or patent, but nowhere asserted any such capacity, as, for example, appearing in his deposition Rec., 578 to 583, and upon cross-examination between Rec., 598 and 603, inclusive. In this deposition Grant testified upon this point affirmatively as follows (Rec., 622; the italics following are ours):

> "The retaining wires in the tire, in my opinion, *stand still or continue to retain their original position with relation to the steel channel.*"

Of course if these retaining wires stand still they could not tip and rise and fall under the varying emergencies of travel, as now asserted.

Grant again says, in this old deposition (Rec., 625, Q. 5) as follows:

> *"I have observed that when the tires are put on sufficiently tight, that they will still be as tight when the tires are worn out; that is, the section of rubber still left in the steel channel will be as tight as when originally put on."*

Certainly this would be impossible if the contacting rubber under the wires tilted and lifted and rose and fell in travel. Again, the patentee Grant said in his deposition of ten years ago, speaking as to whether or not a large or small wire were better for use in the tire, as follows (Rec., 634, Q. 21):

> "The large wire was better as it was not so liable to tear through the bottom of the rubber tire in case of an exceedingly heavy strain or shock on the tire."

Of course Grant could not have then known himself that his tire possessed the capacity of "reseating itself and yielding to severe lateral strain without tearing and abrasion of the rubber or injury to any of the parts,"—or he never would have made this oath more than twelve years ago.

The patentee Grant in that deposition then made the following remarkable statement, which shows beyond any question of doubt, cavil or criticism, that the tipping and tilting capacity in the Grant tire, as originally constructed by him under his patent, and arising out of the fact that the tire was first made and jumped over into the channel rim, and as so loosely applied, would, to a certain extent, tip over in the channel, by reason of this fact,—that Grant considered this tipping over of a loose wire a defect and disadvantage to be overcome, by making the

tire fixed at its base in the channel. Grant in his 1897 case, last above identified (Rec., 651), testified as follows:

"X-Q. 59. You have mentioned two devices used by you in your efforts to prevent traveling of the rubber in the channel. Did you at one time resort to the plan of cementing or sticking the rubber to the channel for this purpose?

"A. *We used cement at one time, but not for the purpose of keeping them from traveling, but for the purpose of preserving the canvas on the lower side of the rubber and to assist in keeping the rubber tire from 'tipping over' in the channel. The witness at that time thought that it was a benefit to allow the tire to creep slightly and still thinks so, and, as stated before, this cement which was nothing more than common shellac, was put in there for the purpose stated.*

"X-Q. 60. When did you abandon the use of the shellac?

"A. *We discovered some three years ago probably that the shellac was of no particular benefit, but still we could not see that it done any harm and we instructed our branches that they could use it or not, just as they chose, and I could not state when they all abandoned using it.*"

Here we have this patentee Grant testifying solemnly, under oath, at a date prior to the discovery of the alleged tipping capacity, by his experts, to a fact, namely, the fact that in the tires, as first constructed and applied under his patent, he cemented them at their base to the channel to prevent the tire from "tipping over" in the channel, and that this was common practice, even to instructing their branch agencies so to do at that time. It is entirely evident also from these quotations from Grant's 1897 deposition that he thought that the wires, although

jumped over in the channel, would hold the tire tight enough and firm enough to its base to prevent tipping, but that the wires, although somewhat loosely applied, supplemented with cement, prevented this tipping.

This testimony of Grant, nearly fourteen years ago, is also complete confirmation of the testimony of certain witnesses in this record, above quoted, to the effect that the earlier Grant tires, put on under the patent in suit, were cemented to the rim, and no movement possible at the base. There can be no question that if the Grant tire is cemented to its seat or base this "distinguishing feature" of tilting of the Grant tire would be eliminated. Upon this point we have the high authority of the Court of Appeals in its opinion in the Firestone case, in speaking of the Latta patent of May 11, 1886, and stating among other reasons the impossibility of this patent anticipating the Grant patent, as follows:

> "The description says that 'it is obvious that the tire may be secured to its seat and cemented in the usual manner, if it is desired.' *If this were done the distinguishing feature of the Grant tire would in any view be eliminated.*"

It would really seem folly and foolishness to contend that Grant knew, or had the faintest conception, or suspicion, of the presence of this advantageous "distinguishing feature" of tipping in his patent when he cemented the base of his tire to its seat in the channel rim, as he says in his deposition, "to prevent tipping."

THIRD. The patentee Grant disclosed in his testimony given ten years ago, as shown by certified

copy of such deposition in this case, that about a year after the grant of the patent, Grant discovered that his tire when completed beforehand and jumped on the wheel into the channel, was practically a failure, and that this complainant, the Rubber Tire Wheel Company, and Grant, who was then vice-president of that complainant, changed their method of completing and jumping on the tire, to the new method of straining the wires to their utmost tension without breaking, in applying the tire, and thus clamping the tire, to its base, down upon the rim. This matter is made clear in the deposition given by Grant upon his patent ten years ago, and appears in this Record, 649. The condition of the tires of the Grant patent as made and used for some time after the grant of the patent is well set forth in a quotation from the deposition of one of the now active counsel for the patent in this case, Mr. Stapleton, who was the leading witness against the grant patent, and was an active factor in behalf of the defendant then sued. Stapleton then testified as follows (Rec., 648):

> "It is my judgment that the tires of both the complainant and the defendant *as they were applied at the time this suit was brought, and for a long time afterwards*, was an absolute failure and would not satisfy the public for any length of time."

Fourth: The prior Blosser & Kunkle patent, No. 529,474, November 20, 1894—File-Wrapper and Contents,—suggestion "tipping capacity" entirely absent.

Admittedly this patent antedates the Grant patent, and admittedly this patent shows the precise thing or device in one of the drawings, shown in the Grant patent, and if this patent stood as a prior patent in the record there could be no contention that everything shown by Grant and claimed by Grant was shown, at least, if not claimed, in the Blosser & Kunkle patent. It is contended, however, by complainants that the Blosser & Kunkle patent, although prior in date to the Grant patent, was subsequent in date of invention, for the reason that Blosser & Kunkle were connected with Grant at the time he professes to have made the alleged invention of the patent in suit—were personal and confidential friends of his, and that Grant confided in them everything relating to his invention, and that their patent is for an entirely different invention, as to subject-matter, being an invention upon wheels, and not upon tires.

An examination of the file-wrapper and contents of the Blosser & Kunkle patent shows, however, that there originally was a claim in the application as follows:

> "The combination with a wheel having a grooved felloe, as described, of a rubber tire secured in said felloe by retaining wires, and having a central groove or recess on the inside of said tire and without said felloe, substantially as described."

One thing is certain, therefore, that Blosser & Kunkle, neither in their application for their patent, nor in the patent, as granted, gave any hint or intimation that they supposed that the tire of their patent had any capacity for rising or falling or tilting under lateral strain, and it is very curious that if Grant had confided to them any such quality in his tire construction, or his knowledge of any such "tipping capacity" they would not have said something about it, either in their patent, or in the application therefor, as shown by the file-wrapper and contents. Their silence upon this point is a strong antecedent condition, cumulative in its effect to the end that the bosom friends of Grant, who took out a patent on a tire precisely of his construction, before Grant ever went into the Patent Office, did not disclose or suggest, in any manner, any "tipping capacity" in their tire. Defendant's expert, Mr. Samuel N. Pond, discusses this Blosser & Kunkle patent and these contentions (Rec., 119-20).

Fifth: The File-Wrapper and Contents of the Grant patent in suit—shows no suggested "tipping capacity."

It is a curious fact also that while, admittedly, Grant himself in his patent makes no suggestion of this alleged "tipping capacity" nowhere in the file-wrapper and contents, and his action in the Patent Office, and in none of the correspondence between Grant and his attorney and the Patent Office, as disclosed by this file-wrapper and contents, is there any suggestion or mention, in any

way, of this alleged "tipping capacity," although if such capacity had been thought to exist the fact would have been presented by Grant and his attorney and made prominent in their argument in the Patent Office to obtain the patent. Some of the claims of Grant, as originally filed, in the Patent Office and abandoned, point affirmatively to an entire ignorance of Grant at that time upon this point. This matter is discussed analytically and entirely by defendant's expert Pond (Rec., 166-170), Mr. Pond closing his review of this Grant file-wrapper and contents by the following statements (Rec., 170):

> "In further answer to this question I might add that in none of the correspondence between the applicant and the Patent Office do I find any mention or suggestion of the alleged 'tipping capacity' of the tire, which, had it been known at that time, undoubtedly, I think, would have been strongly urged, and an argument for the allowance of the patent."

The above classified antecedent facts and conditions discussed under the above five clauses seem to make it certain that, so far as Grant himself is concerned, neither at the date of the application for his letters patent in suit, nor for several years after its grant did he, or any of his attorneys or experts, have any knowledge, belief or conception that there existed any desired "tipping capacity" in his tire, nor any possibility of any "tipping capacity," except that which resulted from looseness in applying the tire over the rim, with the resulting disadvantages for so doing, fully disclosed by this record.

The record is simply full of a vast number of old

patents relating to rubber tires of every conceivable form, both as to metal and rubber, and some of them so closely approximating the Grant patent as to parallelism of construction and operation that there would really seem to be no opportunity for substantial differences, either as to construction or result between Grant and the old art.

The wide success and wide use of tire of the Grant patent reulted from no disclosure in the patent itself, but from three subsequent discoveries and conditions since the grant of the patent.

This fact and condition is proven by three separate, undisputed classifications of testimony in this record:

(1) That the tire of the Grant patent could be clamped and fixed in position by the straining of the two retaining wires to their utmost tension and thus holding the tire base immovably in constant fixed position upon the channel rim;

(2) The production, by mechanical means, cheaply and expeditiously as a commercial product, of the channel rim in straight lengths to be applied to the wheel; and

(3) The improvement of the rubber itself; the demand of the public for a solid rubber tire, and the wealth of the complainant, advertising in the market, and pushing and exploiting the tire.

There is no doubt that the complainant, the Rubber Tire Wheel Company, and Grant, in the first place, completed and jumped the tire into place over

into the rim; this is now admitted by complainant and it follows, as a matter of course, that the same force which jumped the completed tire into the rim would jump it out again in actual use. The records disclose the fact that the act or thing which made, more largely than any other condition, the Grant tire a success, was the discovery that you could hold the tire in place and fixed upon its base by straining the wires to a clamping point, indicated by a straining just this side of the breaking point of the wire. This was a new discovery and was not known to Grant or suggested in his patent, or practiced by him or others until some time after the date of his patent, and when known this complainant and Grant changed to this method and abandoned the old method of completing and jumping on their tires.

This fact is shown in the certified copy of Grant's deposition of ten years ago, where Grant testified as follows, upon cross-examination (Rec., 649-50):

> "X-Q. 52. Did you at any time change your method of putting on tires? If so, when?
>
> "A. I can't say that we changed the method of putting on the tires farther than to adopt a plan to put them on as tightly as possible, tighter than we usually did when first putting on these tires. That plan was adopted I think some time in the middle of last year.
>
> "X-Q. 53. Do you mean by that that it was put into practice by the middle of last year?
>
> "A. It was about one year ago that we decided that what trouble we were having with the tire was caused by it being put on too loosely. *We at that time decided to put them on as tight as possible* and from that time watch this feature of the business a great deal closer than

before, *and I expect it would be said we adopted it at that time.*"

"X-Q. 55. Prior to the time you adopted the new plan did you first form the tire into a hoop, and afterwards seat it in the channel by stretching it over the flange with tools for that purpose?

"A. I would rather not answer that question for the same reasons given in my last answer.

"X-Q. 56. Do you decline to answer?

"A. I do."

Grant further testified as follows (Rec., 650-1):

"X-Q. 58. In your new plan of applying tires do you draw up the wires in the flanges and fasten them without throwing or stretching them over the flanges after the ends of the wires are united?

"A. I decline to answer that question."

It is curious that the patentee Grant, ten years ago, refused to state, not only whether or not in applying his tires he completed the tire and then jumped it over into the rim, or whether or not, in his admittedly new plan of applying his tires, by wiring he did so by stretching the wires and fastening them after the tire had been placed in the channel rim. This position of Grant at that time can mean nothing except that the patent disclosed nothing as to wiring the tires in so as to prevent the tipping action, either by first forming the tire and jumping it into the rim, or stretching the wires after the tire was in position. Whichever way you look at it it is perfectly evident that the Grant patent gave no instructions as to this matter and that Grant himself knew no other method of putting on

a tire under his patent, except to complete it and then jump it on over the rim—until a year or two after the patent grant.

There can be no doubt that the metal rim, rolled in final form, and produced expeditiously and accurately, and now as a common article of commerce, is one of the main factors in the adoption and use of the tire of the Grant patent. The patentee Grant had to require the special construction of this rim, and did not know of its existence at the date of his patent. (Rec., 608; X-Qs. 136-7.) It is not now disputed that this channel rim was old in the tire art long before the date of Grant's invention, as evidenced by several patents in suit, principally Willoughby.

The question of the improvement of the rubber itself—the wide advertising of the tire, and the pushing and exploiting of the tire, by the complainant, is recognized in the opinions of the Courts of Appeal as a marked factor in the adoption of the tire; taken in connection with the advanced wealth of the country, and the demand of the public for easier riding vehicles with rubber tires.

The statement found in the opinion of the Court of Appeals of the Sixth Circuit clearly recognizes these facts, and gives the reasons therefor as follows (116 F. R. 377):

> "Much stress has been laid upon the commercial success of the Grant tire. Aside from the fact already mentioned, that much of the durability of the tire is due to the better quality of the rubber used, there is much evidence that this success is to be largely attributed to

the power of great capital in buying or crushing out rivals, and to great business push and advertising. There is too much evidence in this record as to consent decrees against rival makers of tires to predicate much upon the mere fact that the Grant tire has met with a large sale."

The rule of law to prevail in this case—under Kessler v. Eldred, 206 U. S. 285.

It appears by the undisputed record in this case that this Grant patent has been declared invalid in a case of these same complainants against the Goodyear Tire and Rubber Company and the Victor Rubber Tire Company, two distinct corporations and manufacturers, in two separate suits, in the United States Circuit Court of Appeals of the Sixth Circuit, and has been declared invalid in the United States Circuit Court for the District of Indiana in the Seventh Circuit in a suit against the Kokomo Rubber Company. In view of these facts, the court so held and decreed that the injunctional order in this case did not and was not intended to enjoin the defendants from handling and selling the rubber tire made by either of the three defendants above identified, the injunctional order of decree of the court as to this matter being as follows (Rec., 693-4):

"Nothing in this injunction shall prevent or is intended to prevent or enjoin this defendant from handling, using and selling rubber tires and rims covered by the Grant patent, manufactured by the Goodyear Tire and Rubber Company, having a right to manufacture, use and sell such tires under a judicial decree in the federal courts of the Sixth Circuit; or man-

ufactured by the Kokomo Rubber Company, having a right to manufacture, use and sell such tires under a judicial decree in the District of Indiana, Seventh Circuit; or manufactured by the Victor Rubber Tire Company, under a judicial decree in a litigation in the federal courts in the Sixth Circuit, wherein in such litigations it has been judicially determined that the said Grant patent is invalid and void."

It is respectfully contended that this order should have been substantially broader, and that this petioner appellant should not have been enjoined from the handling or sale of tires manufactured in the Sixth or Seventh Circuits and there purchased by this defendant; or otherwise stated, this Grant patent has been judicially declared invalid in the Sixth and Seventh Circuits and every manufacturer having a right to manufacture, use and sell the tire of the Grant patent in those circuits, and this or any defendant purchasing these tires in either of those circuits have a right to sell them anywhere in the Second Circuit or in any other of the nine circuits, and for this reason no injunction whatever should have been granted against this petitioner appellant; no proof being present of either the handling, use or sale by this petitioner appellant of any rubber tire, other than purchased by this petitioner appellant in the Sixth Circuit, therefore this suit must fail. It would seem that the case of *Kessler* v. *Eldred, supra*, barred any further action, claim or suit against rubber tires made and sold in the Sixth and Seventh Circuits. Otherwise stated, these tires having been once rightfully and lawfully made

and sold in the Sixth and Seventh Circuits, cannot be followed and sued as infringements of this Grant patent in another circuit. The authorities are abundant as to the proposition that a patented device rightfully manufactured and rightfully sold in a territory where such manufacture is lawful, can be sold elsewhere, even in a territory owned, as to a patent, by a third party. By reason and analogy it would seem, under the authorities, that, the rubber tires in this case proceeded against as an infringement in the Second Circuit, having been rightfully manufactured and sold in the Sixth Circuit, there is no restriction upon their use or sale in any other circuit, and we so respectfully submit.

BRIEF AND ARGUMENT—AUTHORITIES.

I.

The statutes have determined, as a condition precedent imposed upon the applicant and prospective patentee, before a patent shall be granted him, that he shall comply with such statute reading as follows (U. S. Revised Statute):

> "In the case of any machine, he, the patentee, shall fully explain the principle and the best mode or method in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions, and shall particularly specify and point out the particular improvement or combination which he claims as his invention and discovery."

II.

In all cases where his claim is for an improvement on a machine, it will be incumbent upon him to show the extent of his improvement so that a person understanding the subject may comprehend distinctly of what it consists.

Evan v. *Heaton,* 3 Wheaton 454.
Grant v. *Raymond,* 6 Peters 248.
Gill v. *Wells,* 22 Wall. 25.

III.

A failure on the part of the patentee in those perquisites of the act which authorize a patent is a bar to a recovery in an action for its infringement, and the validity of the defense does not depend on the invention or the inventor, but is a legal inference from his conduct.

Grant v. *Raymond,* 6 Peters 248.

IV.

The specific claim of a patent is notice to the world of the most public and solemn kind, that all those parts of the machine or manufacture set out and described in the specification, and not embraced in such specific claim—is not claimed by the patentee, and is not his invention, or if so, has thus been surrendered to the public.

Mahn v. *Harwood,* 112 U. S. 360.

Fay v. *Cordesman,* 109 U. S. 421.

Keystone Bridge Co. v. *Phoenix Iron Co.,* 92 U. S. 274.

Merill v. *Yeomans,* 94 U. S. 568.

White v. *Dunbar,* 119 U. S. 51.

V.

Where the patent is for an improvement and clearly identifies the invention, which invention is set forth in the claim, and where such claim is clear and explicit, as well as the specifications, neither

court nor counsel are required to go into and examine the old art and the patentee must abide by his claim.

LeRoy v. *Tatham*, 14 How. 156.
James v. *Campbell*, 104 U. S. 356.
Mahn v. *Harwood*, 112 U. S. 360.
Fay v. *Cordesman*, 109 U. S. 421.
Keystone Bridge Co. v. *Phoenix Iron Co.*, 92 U. S. 274.
Merill v. *Yeomans*, 94 U. S. 568.
White v. *Dunbar*, 119 U. S. 51.
Burns v. *Meyer*, 100 U. S. 671.
Machine Co. v. *Lancaster*, 129 U. S. 263.
Snow v. *Railway Co.*, 121 U. S. 629.

VI.

The construction of the patent is governed by the claim. A claim must be construed by its terms when they are clear and cannot be enlarged.

Railroad Co. v. *Sayles*, 97 U. S. 554.
Railroad Co. v. *Mellon*, 104 U. S. 112.
Yale Lock Co. v. *Greenleaf*, 117 U. S. 554.

VII.

The burden of proof is always upon the complainant and never shifted to establish the fact of infringement.

Seymour v. *Osborne*, 11 Wall. 516.
Fuller v. *Yentzer*, 94 U. S. 288.
Imhauser v. *Buerk*, 101 U. S. 647.
Agawan v. *Jordan*, 7 Wall. 583.

VIII.

The rubber tire of the petitioner appellant having been rightfully made and rightfully sold in the Sixth Circuit, where and after the Grant patent had been declared invalid, as appears in the cases, *supra,* the petitioner appellant has full right to handle, use and sell said tire so purchased, in the Second Circuit:

> *Kessler* v. *Eldred,* 206 U. S. 285; *Adams* v. *Burke,* 17 Wall. 453; *Birdsell et al.* v. *Shaliol,* 112 U. S. 487; *Hobbie* v. *Jennison,* 149 U. S. 354; *Wade* v. *Metcalf,* 129 U. S. 202; *Boesch* v. *Graff,* 133 U. S. 697; *Keller* v. *Standard Folding Box Co.,* 157 U. S. 659.

IX.

Where the old art is crowded and replete with close approximations to the invention of an asserted patent, it is a saving of labor and time of court and counsel to select and compare the closest approximation to the asserted invention of the patent, for if these close approximations do not anticipate the invention, certainly none of the others so do, and if they do so anticipate or so closely anticipate the inventions of the patent in suit, as to its pretended novelty, it is immaterial whether the other old patents do or do not.

> *Topliff* v. *Topliff,* 145 U. S. 160.

X.

The general use and adoption of a patented article, as affecting patentable novelty or invention, is without probative force, especially if it is shown that large capital and extensive advertisement can account for such general use.

McClain v. *Ortmayer,* 141 U. S. 419.
Watch Case Co. v. *Robbins,* 75 F. R. 17.
Lane v. *Welds,* 99 F. R. 286.

Conclusion.

In conclusion, your Honors, your petitioner respectfully submits that the writ of *certiorari* being granted and the full record of this case being now before this court for final review and determination, and the case having been fully heard upon the merits, that upon such hearing so had there is a clear right in the petitioner to the end and purpose that the decrees and findings of the trial courts shall be reversed and the cause remanded, and the bill of complaint herein dismissed at complainant appellees' costs as without equity.

Respectfully submitted,

CHARLES K. OFFIELD.